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The Demography of Islamic Nations

By John R. Weeks

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Abstract—The Moslem population of the world is estimated at 984 million persons in 1988; almost one-quarter of the world population may be Moslem after the turn of the century if current high levels of fertility persist. There are more Moslems today in Asia and sub-Saharan Africa than in the Arab Middle East where Islam arose in the 7th century A.D.

The Islamic nations are the fastest growing population group worldwide—through natural increase, not conversion—although Islam is the only major monotheistic religion not to forbid contraception. Almost all Islamic countries have very high levels of fertility, mortality, and natural increase even though there is wide diversity among them, stretching as they do from Albania in Europe to the world's fifth most populous nation, Indonesia in Southeast Asia, and ranging from the wealth of the oil-producing states in the Gulf and Brunei to the poverty in densely-populated Bangladesh and drought-stricken countries in Africa.

The author argues that it is not Islam per se that causes these demographic trends, but the generally early stage of development and the low status of women in traditional, patriarchal societies.

There are 40 countries in which 50-100 percent of the population is Moslem; 7 in which 25-49 percent are Moslem; and 9 countries with over 2 million Moslems each but where they do not total 25 percent of the population. These include China, India, the Soviet Union, and Yugoslavia, countries where ethnic and religious divisions often create political problems.

Editor: Roberta Yared Graphics: Joanna Lawrence

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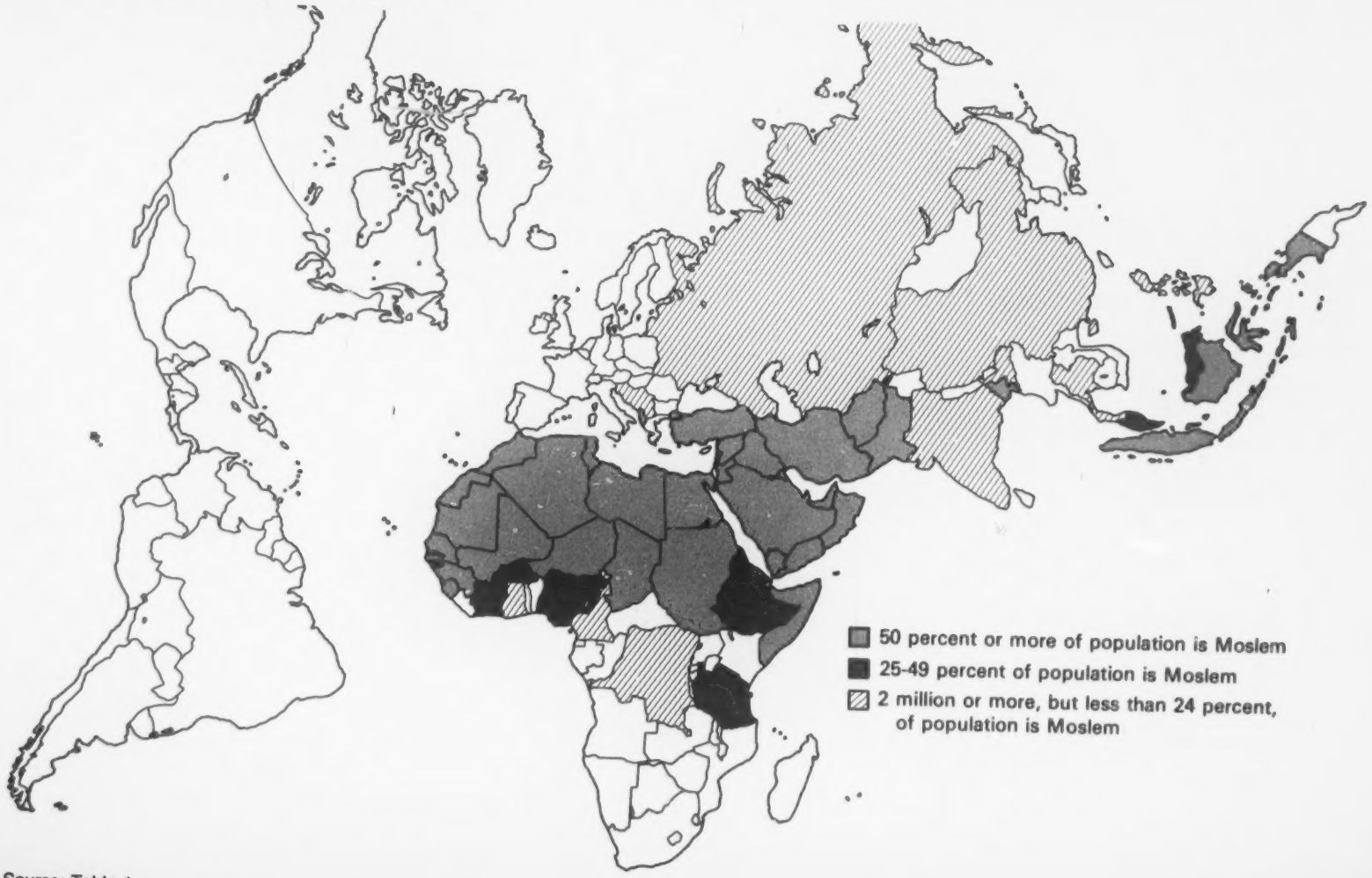
Figure 1. Islamic Nations, 1988


50 percent or more of population is Moslem
25-49 percent of population is Moslem
2 million or more, but less than 24 percent, of population is Moslem

Source: Table 1

The Demography of Islamic Nations

By **John R. Weeks**

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The author thanks Thomas W. Merrick, Roberta Yared, Carl Haub, Alexander von Cube, and Machiko Yanagashita of the Population Reference Bureau for their generous encouragement and assistance. He is also appreciative of the help of Dudley Poston and Jia Zhongke of Cornell University for data on Moslem minorities in China and he thanks Joseph Chamie of the United Nations Population Division and Georges Sabagh of the University of California, Los Angeles, for their cooperation. Sara Copeland and Amy Segawa provided invaluable aid with the bibliographic search, and Deanna Weeks provided her usual masterful tools of manuscript editing.

The Islamic nations are the world's fastest growing population group. Nearly 1 in every 5 human beings is Moslem,* and there are Moslems residing in virtually every nation of the world. Indeed, there are more Moslems in Southern and Southeastern Asia and in sub-Saharan Africa than in the Arab countries of the "Middle East" where Islam arose.

At current rates of growth, the 1988 estimated population of some 980 million Moslems could nearly double to 1.9 billion before the year 2020, accounting then for 23 percent of the world's total.[1] Although Islam is a proselytizing religion, its proportionate increase in the modern world is much more a result of natural increase (the excess of births over deaths) than it is the conversion of non-Moslems to the Islamic faith. The nations of Islam tend to be farther behind in the demographic transition from high to low birth and death rates than other major categories of nations. As a group, they have the highest fertility levels (with only a few signs of an impending decline), the highest mortality (although declining), and some of the highest rates of natural increase.

This *Bulletin* examines the demographic dynamics of the Moslem world, focusing analysis especially on the causes and consequences of the rapid rate of population growth in those nations in which a significant fraction of the population follows the Islamic faith.

*There is no universally accepted transliteration of Arabic script into the Latin alphabet. We will follow the predominant American usage of, for instance, Moslem and the Koran, rather than Muslim and the Qur'an.

What is Islam?

A Moslem is one who has "submitted" (the literal translation of *Islam*), "committed" to God and has accepted the Islamic creed that "There is no god but Allah, and Mohammed is the messenger of Allah." Like Jews and Christians, Moslems are monotheists, and all three groups share in common the prophets of the Old Testament. Moslems accept Jesus Christ as a prophet and even acknowledge his virgin birth, but they do not accept his divinity. Nor do they believe Mohammed divine—to Moslems he is the last prophet through whom God revealed his Word. Judaism rejects both the divinity of Jesus and the idea that Mohammed was the last chosen prophet of God.[2]

The fount of Islam is Saudi Arabia, the birthplace of the Prophet Mohammed in the late 6th century A.D. That country has two holy cities: Mecca, where Mohammed was born and received God's revelations and which is also the site of the Kaaba—the Islamic shrine that incorporates the large Black Stone that had been holy to Arabs even before Mohammed's era (and to which Moslems turn in prayer); and Al-Medina (literally, "the City"), to which Mohammed migrated after being initially ostracized in Mecca for preaching the new Word of God. That migration (*hejra*) occurred in A.D. 622, which is used as the first year of the Moslem lunar calendar.

From its roots in the Arab world, Islam spread quickly in virtually every direction, as far west as the Atlantic Coast of Africa, as far east as Indonesia, and as far north as the gates to the city of Paris. The historical peak of consolidated Islamic political strength was the Ottoman Empire. The Turks had accepted Islam in the 10th century and by the 15th century had built an Islamic empire that virtually ringed the Mediterranean. Ottoman power began to crumble in the 17th century as European colonization picked up steam, and ended officially in 1923 with the proclamation of the secular (albeit Moslem) Republic of Turkey, However, the decline of the political empire was not accompanied by a decline in the number of Moslems. Islam has continued to spread throughout the world.

The core of religious behavior for Moslems is embodied in the Five Pillars of Islam: (1) the creed (*al-Shehada*) that "There is no god but Allah, and Mohammed is the messenger of Allah;" (2) regular prayer; (3) giving alms; (4) fasting during the daylight hours of the month of Ramadan; and (5) undertaking a pilgrimage (the *Haj*) to Mecca (for those who can afford it). Moslems are further bound by the regulation of everyday life prescribed by the *Sharia* (the "way" or "the straight path")—the Islamic law covering both religious and civil activities (in classical Islam there is no difference between the two). The Sharia draws primarily from the Koran (the Word of God as revealed to Mohammed), as well as from the *sunna* and *hadith* (the collection of traditions and sayings of Mohammed), the *qiyas* (body of reasoning developed by jurists over time), and the *ijma* (consensus of a group of judges representing a Moslem community). Religious courts administer the Sharia, and in an officially Islamic nation such as Iran or Saudi Arabia, are the only courts in the land. In most Islamic nations, however, there are two sets of laws—secular and religious—governing different but complementary aspects of people's lives. We might note that the fundamentalist movement within modern Islam rests primarily on the attempt to establish Islamic republics in which the Sharia is the only governing law.

There are two major Moslem groups—the Sunni and the Shia (Shiite Moslems). The origin of their difference lies largely in their belief as to who should lead Islam after the death of the Prophet Mohammed. Sunni Moslems endorse Abu Bakr who was elected Caliph ("leader"); he was a faithful friend and the first convert to Islam. Shias believe that Mohammed's son-in-law Ali (also a cousin

and close friend of the Prophet) should have been chosen Caliph. The majority of Moslems in the world today are Sunnis, but Shiism is the major minority sect and forms the majority in two Islamic societies—Iran and Iraq, although in Iraq the minority Sunnis control the government. The Shiites in Iraq are, not coincidentally, concentrated in the eastern part of the country that borders Iran. Shiite Moslems are also a majority among Moslems in Lebanon, but they do not represent a majority of the total Lebanese population (which has a large Christian minority).

There is no central authority in Islam, and therefore no Moslem hierarchy or bureaucracy. This leaves leadership open to local clerics who may or may not have formal training, but who live among and work with a local community and mosque and may gain considerable prestige and clout. In the Arab world and Iran, the religious leaders are usually called *imam* or *sheikh*, whereas farther east, in Afghanistan, Pakistan, and India they are more often called *mullah*, and they hold the title *mallam* in West Africa.

Islam is far more than a religion—it is a complete way of life. Sharia governs virtually every aspect of human existence, although in practice Islam has been quite adaptable to local customs. Nonetheless, the maintenance of a worldwide community of Moslems is one of the underlying goals of Islamic life, exemplified in particular by the pilgrimage to Mecca, which serves to underscore to each pilgrim the vast reach of the faith and the communality of its followers. Of special interest to the demographer are those aspects of Islam that govern marriage and family life, including the social relationships between males and females.

Social Relationships in Islam

Islam very strongly promotes marriage for whomever can afford it. Prophet Mohammed referred to marriage as "half of the religion" and said, "Marriage is my tradition. He who rejects my tradition is not of me." Marriage is a contract that gives the partners the legitimate status of a family and establishes the legal and moral rights and duties of the couple and their children. To prevent women from being forced into marriage, Islam specified that free consent of the woman is a prerequisite to marriage. Divorce is considered to be very undesirable in Islam, but it is far easier for a male to initiate a divorce than for his wife to do so.

Islam supports the dominance of males in society, although the Sharia requires fairness and compassion for females. An Islamic society is patriarchal, with the stipulation that both males and females always belong to their patrilineal kinship group; the eldest male has full authority over the family. It is important, however, to keep the issue of male dominance in historical perspective. In a world in which women were often little more than chattel or slaves, Islam accorded to women secure legal rights including independent legal status, the right to own and dispose of property, and the right to receive a share of inheritance (half as much as the male members of the family). "The position of women in Islam is inferior to that of the male, yet it is far superior to their position among animists prior to the coming of Islam. In Arabia, Islam stopped the common practice of female infanticide, reduced the multiplicity of wives to four, and stipulated that each wife must be treated equally."[3] The dominance of men is accompanied by their paternalistic attitude toward women, as well as by their "deep concern for the sexual purity of their daughters and the constancy of their wives."[4] In many Islamic societies, this often leads to the arranged, early marriage of daughters, along with the seclusion of women in the home (*purdah*), and the veiling of women in public. In exchange, men are obligated to provide for all of the women (including the unmarried, divorced, and widowed) and children in the family.

Defining Islamic Nations

There are 40 nations in the modern world in which a majority of the population is Moslem, according to the best available estimates (see Table 1 and Figure 1, p. 4). In a handful of cases, such as Iran and Saudi Arabia, the Sharia is the complete and only law of the land. There are several countries, such as Algeria and Pakistan, in which Islam is the declared official state religion, even though some aspects of secular rule involving matters of state and sentencing of criminals may complement Sharia rule. These 40 Moslem-majority countries are the core of the Islamic world.

There are an additional seven countries in which a significant minority—25 to 49 percent—of the population is Moslem. Statistical analysis of several combinations of major demographic variables (including crude birth rate; crude death

Table 1. Islamic Nations, 1988

Country	Percent Moslem	Total 1988 Population (millions)	Moslem Population
I. Countries in which a majority of the population is Moslem:			
Comoros	100	0.4	.427
Maldives	100	0.2	.203
Western Sahara	100	0.2	.181
Afghanistan	99	14.5	14.336
Algeria	99	24.2	23.953
Bahrain	99	0.5	.500
Mauritania	99	2.1	2.049
Morocco	99	25.0	24.726
Oman	99	1.4	1.358
Saudi Arabia	99	14.2	14.044
Somalia	99	8.0	7.910
Tunisia	99	7.7	7.692
Turkey	99	52.9	52.452
North Yemen	99	6.7	6.665
South Yemen	99	2.4	2.402
Gaza	98	0.6	.563
Iran	98	51.9	50.886
Libya	98	4.0	3.877
Pakistan	97	107.5	104.243
Iraq	96	17.6	16.880
Kuwait	96	2.0	1.881
Qatar	95	0.4	.394
Jordan	93	3.8	3.573
Egypt	91	53.3	48.600
Senegal	91	7.0	6.354
Djibouti	90	0.3	.288
United Arab Emirates	90	1.5	1.338
Indonesia	88	177.4	156.136
Gambia	87	0.8	.678
Niger	87	7.2	6.305
Syria	87	11.3	9.864
Bangladesh	85	109.5	93.050
Mali	80	8.7	6.933
Sudan	72	24.0	17.291
Albania	70	3.1	2.203
Guinea	69	6.9	4.788
Brunei	64	0.3	.166
Lebanon	60	3.3	2.003
Chad	51	4.8	2.437
Sierra Leone	50	4.0	1.982
Total	91	771.6	701.611

rate; total fertility rate; infant mortality rate; life expectancy; the ratio of men to women enrolled in secondary schools; and the percentage of brides who are under age 20) revealed that the Moslem-minority nations are much more similar demographically to the Moslem-majority nations than they are to other developing nations. Based on this finding, we have included the Moslem-minority nations (listed in section II of Table 1 and shown in Figure 1) among the nations of Islam.

There are also nine countries in which the proportion of the population that is Moslem is less than 25 percent, but in which the Moslem population numbers 2 million or more (a size that we have somewhat arbitrarily termed "significant"). China, India, and the Soviet Union are the more notable examples in this category, and these countries are listed in section III of Table 1 and are also shown in Figure 1. Statistical analysis did not reveal a consistent pattern of these countries being more like Islamic nations than like other nations, and so they are not included in our analysis of Islamic nations, although they clearly

II. Countries in which a significant minority (25–49 percent) of the population is Moslem:			
Malaysia	49	17.0	8.314
Nigeria	45	111.9	50.357
Burkina Faso	44	8.5	3.734
Guinea-Bissau	38	0.9	.359
Ethiopia	35	48.3	16.941
Tanzania	30	24.3	7.289
Côte d'Ivoire	25	11.2	2.796
Total	40	222.1	89.790
III. Countries in which a significant number of people (2 million or more) is Moslem, even though they represent less than 25 percent of the total population:			
Cameroon	22	10.5	2.317
USSR	17	286.0	49.464
Yugoslavia	16	23.6	3.773
Ghana	15	14.4	2.168
India	11	816.8	89.034
Zaire	10	33.3	3.330
Philippines	6	63.2	3.539
Thailand	4	54.7	2.189
China	1.5	1,087.0	15.870
Total	7	2,389.5	171.684
Total for Islamic Nations	29	3,383.2	963.085
Other Moslem populations*			20.461
World Total	19.2	5,128.0	983.546

*Other Moslem populations (country, percent Moslem, number Moslem in millions): Belgium (0.7%) .069; Benin (16%) .720; Bhutan (5%) .075; Bulgaria (11%) .988; Burma (3.6%) 1.479; Burundi (1%) .052; Canada (0.6%) .157; Central African Republic (8%) .221; Cyprus (18.5%) .127; Equatorial Guinea (0.7%) .002; Fiji (8%) .059; France (1%) .559; Gabon (1%) .013; Greece (2.5%) .252; Guyana (9%) .069; Hong Kong (0.5%) .028; Israel (12.5%) .554; Kampuchea (2.4%) .160; Kenya (6%) 1.401; Liberia (21%) .517; Madagascar (2%) .218; Malawi (16%) 1.229; Mauritius (17%) .187; Mayotte (98%) .068; Mongolia (9.5%) .194; Mozambique (13%) 1.967; Nepal (5%) .913; Panama (4.5%) .104; Reunion (2.4%) .013; Romania (1.2%) .276; Rwanda (8.6%) .607; Singapore (18.3%) .483; South Africa (1.2%) .421; Sri Lanka (8%) 1.331; Suriname (14%) .055; Taiwan (0.5%) .099; Togo (16%) .534; Trinidad and Tobago (6.5%) .083; Uganda (6.6%) 1.086; United Kingdom (1.4%) .799; United States (0.6%) 1.477; Vietnam (1%) .652; Zambia (1%) .075; Zimbabwe (0.9%) .088.

Sources: The principal source of data on the percentage of the population that is Moslem is Richard V. Weekes, *Muslim Peoples: A World Ethnographic Survey*, 2nd edition, (Westport, CT: Greenwood Press, 1984) appendix I; updated by Mark S. Hoffman, ed., *The World Almanac and Book of Facts 1988* (New York: Pharos Books, 1987) pp. 650-738; 1971 Census of Indonesia and the 1974 Census of Bangladesh; Population Reference Bureau, *1988 World Population Data Sheet*

Box 1. Moslems as Minorities in the Soviet Union and China

Nearly 20 percent of Moslems (approximately 172 million) are living in nations where they are clearly in the minority, as noted in Table 1. The conflict between Hindus and Moslems in India is a regular news headline, but less is commonly written about Moslems in other nations. Outside of India, the largest Islamic minority population is in the Soviet Union, where there are an estimated 49 million Moslems, representing about 17 percent of the total Soviet population. Although there are more than 100 different ethnic groups within the borders of the USSR, 36 of them are of Islamic origin.[1] For the most part they inhabit the southwestern corner of the Soviet Union, in territory that for centuries was part of the Ottoman Empire but which was absorbed by the Soviets after World War I.

Of particular demographic importance is the fact that the Moslem population in the Soviet Union has been growing far more rapidly than the Russian population (see Table).

In the 1970s Moslems were increasing at a rate that was four times greater than the Russian population, whereas between 1929 and 1959 the Russians had been increasing more rapidly than Moslems. The Russian population has passed through the demographic transition earlier than has the Moslem population, in a classic mirroring of the worldwide difference between the transitions experienced by developed societies (in this case the Russians) and a developing society (in this case the Soviet Moslem minority). Mortality is now dropping among Moslems, but fertility remains high. The Russian population, by contrast, has already traversed the entire demographic transition to low fertility and mortality. For Soviet planners, the rapid population increase among all minority groups, including Moslems, has presented a set of policy dilemmas, since Russians tend to dominate the political and military institutions of Soviet society. Members of minority groups are clamoring for increased access to society's resources.[2]

In China, Moslems account for only an estimated 1.5 percent of the population, but that still leads to a Chinese Moslem population of 16 million. Of the officially recognized 55 minority nationalities in China, the Hui and the Uygur represent the numerically largest predominantly Moslem groups, accounting for about 80 percent of all Moslems in the country.[3] There are an additional eight predominantly Islamic ethnic groups which account for the remainder of the Chinese Moslem populations, including the Kazak, Ozbek, Tajik, Tatar, Kirgiz, Salar, Dongxiang, and Bonan. In general, the Chinese Moslem population seems to

Percentage Increase in Population

	1929-59	*1959-70*	*1970-77*
Total Soviet Union	42	16	8
Russians	47	13	6
Moslems	41	45	23

Source: Alexandre Bennigsen and S. Enders Wimbush, *Muslims of the Soviet Empire* (London: C. Hurst and Company, 1985) Table 6.3

defy demographic generalization, because the differences among groups are much more noticeable than are the demographic similarities. The largest group, the Hui, numbers about 7.2 million persons and geographically is widespread throughout the country. They tend demographically to be more like the Han majority than almost any other minority group except Koreans. Data from the 1982 Census of China show an average number of children ever born of 2.81 per women, with 33 percent of women of reproductive age being childless and 11 percent having only one child. By contrast, the Uygur, who number 5.9 million, are heavily concentrated in the northwest corner of China (bordering the predominantly Moslem area of the Soviet Union). They average 3.49 children per woman, and 27 percent of the women are childless, while 11 percent have only one child. Compared with the Hui, the Uygur are more rural and have a lower life expectancy. Minorities have been exempt from the "one child" policy.

The apparent demographic differences between Moslem minorities in China and in the Soviet Union serve as a reminder that generalizations are hard to support when it comes to examining the specific impact of Islam on demographic behavior.

References

1. Akiner, Shirin, *Islamic Peoples of the Soviet Union*, second edition (London: KPI Limited, 1986).
2. Bennigsen, Alexandre and S. Enders Wimbush, *Muslims of the Soviet Union* (London: C. Hurst and Company, 1985); Kettani, M. Ali, *Moslem Minorities in the World Today* (New York: Mansell Publishing Limited, 1986).
3. Poston, Dudley L., Jr. and Jing Shu, "The Demographic and Socioeconomic Composition of China's Ethnic Minorities," *Population and Development Review*, Vol. 13, No. 4 (December 1987).

represent a part of the Moslem world.

Geographically, the largest number of Islamic nations is in what is usually called the "Middle East" (a term first used in the *National Review* of London in 1902 by the American naval historian Alfred Thayer Mahan and picked up by journalists during World War II). That region, as used here, includes North Africa (where all seven nations of that region are Islamic) and Western Asia (where every nation but Israel and Cyprus is Islamic).[5] Table 2, p. 12, shows that these 22 Middle Eastern nations have a combined population of 309 million people and encompass 31 percent of the population of Islamic nations—a plurality, but not a majority. Sub-Saharan Africa has an additional 17 Islamic nations with a combined population of 255 million, representing nearly 26 percent of the population of the Islamic nations. Southern Asia holds 232 million people in just four nations, led by the 110 million in Bangladesh and 108 million in Pakistan. Southeast Asia has three Islamic nations, including the fifth most populous nation in the world—Indonesia. Finally, Albania is the only nation in Europe with a Moslem majority, although its neighbor, Yugoslavia, with a much lower fraction of Moslems, has a larger Moslem population.

With the exceptions of Albania in Europe and Tanzania in East Africa, all Islamic nations to the west of Bangladesh are physically contiguous to at least one other Islamic nation. Bangladesh is an island of Islam in a sea of Hinduism and Buddhism, and Indonesia is, more literally, islands of Islam in the Indian Ocean. Indonesia is the most populous nation of Islam, with a total of 177 million people, 88 percent of whom are estimated to be Moslem. The island of Borneo is shared by three nations of Islam—Indonesia, Malaysia, and Brunei. Thus, the Islamic population of Southeast Asia is concentrated in a contiguous set of islands.

Islam arrived in the East Indies through Arab traders who had been sailing the

Table 2. Islamic Nations by Geographic Region

Region	Number of Countries	1988 Total (millions)	Percent of Islamic Total
Middle East			
Northern Africa	7	138.4	13.9
Western Asia	15	170.5	17.2
Sub-Saharan Africa	17	255.3	25.7
South Asia	4	231.7	23.3
Southeast Asia	3	194.7	19.6
Europe	1	3.1	.3
Total	47	993.7	100.0

Source: Table 1

Asian routes even prior to the advent of Islam.[6] Islam replaced Hinduism and other local religions in Indonesia from the 15th century, but a blending process took place in which many adherents to Islam incorporated into that faith elements of their own previously held group beliefs. This appears to have been true especially in rural areas that had previously been largely Hindu. This blending process, which is aided by the ability of Islam to adapt to local customs, may help to account for the picture that will emerge in this report in which Southeast Asia will be seen demographically to be somewhat different from other nations of Islam. Indeed, this serves as a precursor to a point that will be made repeatedly throughout this study: Regional and ethnic distinctiveness in demographic profiles is often more noteworthy than distinctions made on religion. Let us examine the shapes of those demographic profiles.

The Demographic Distinctiveness of Islamic Nations

The nations of Islam, both individually and as a group, are characterized by higher-than-average fertility, higher-than-average mortality, and rapid rates of population growth. The numbers are presented in Table 3, in which the nations of the world are divided into four different categories: (1) Islamic nations (virtually all of which are developing nations); (2) other developing nations; (3) nations with centrally-planned economies (except Albania, which is an Islamic nation);[7] and (4) developed nations. The 47 Islamic nations have an average[8] crude birth rate (CBR) of 42.1 live births per 1,000 population—25 percent higher than the average for other developing nations, 181 percent higher than the nations with centrally-planned economies, and 221 percent higher than in developed nations. This high birth rate reflects a total fertility rate (TFR) of 6.0 implied lifetime births per woman, compared with "only" 4.5 in other developing nations, 2.1 in nations with centrally-planned economies, and 1.7 (below replacement level) in the developed nations.

The average crude death rate (CDR) for Islamic nations is 13.8 per 1,000 population, which is 37 percent higher than other, non-Moslem developing countries, 19 percent higher than the countries with centrally-planned economies, and 47 percent higher than the developed nations. These death rates reflect average life expectancies at birth of 55 years in Islamic nations, compared with 62 in other developing nations, 70 in the nations with centrally-planned economies, and 75 in developed nations. Especially noteworthy are the differences in infant mortality. A newborn baby in the average Islamic nation has a ten times greater chance of dying in infancy than one born in a developed society.

Despite the high mortality, the very

high birth rate in Islamic countries translates into the world's most rapidly growing population group. Nations of Islam are growing at an average of 2.8 percent per year (implying that their population would only take 25 years to double in size), which is 22 percent faster than the other developing nations (whose doubling time averages 30 years), and 833 percent faster than developed nations, whose doubling time averages 233 years, based on natural increase only and excluding the impact of migration.

Islamic nations can thus be characterized as generally being in the early phase of the demographic transition leading to low fertility and low mortality. Death rates are declining (even though they represent the world's highest levels), but fertility remains very high. Figure 2, p. 14, compares the demographic transition as it occurred in the United States with the current situation in Islamic and other developing nations. The United States has moved through time from an estimated crude birth rate of 55 per 1,000 in 1800 (when the crude death rate was probably above 20 per 1,000) down to the present situation of the CBR at 16 and the CDR at 10 per 1,000 population. The birth rate, of course, bumped up along the way to produce the baby boom of the mid-1940s to mid-1960s. Anchoring our comparisons of the CDR, the average crude death rate in Islamic nations today of approximately 14 per 1,000 is comparable to the situation in the United States at about the time of World War I. On the other hand, you have to go back to the mid–1800s in the U.S. to find a CBR as high as the 42 per 1,000 that is the average for nations of Islam today.

The extremes with respect to fertility in the Islamic world today are represented by a high in the Yemen Arab Republic

Table 3. Demographic Characteristics of Islamic Nations, Compared With Other Nations of the World, 1988

Demographic Characteristic	Islamic Nations	Other Developing Nations	Centrally-Planned Economies	Developed Nations
Number of Nations	47	94	7	25
Average population size (millions)	21.2	30.3	57.0	31.8
Average Crude Birth Rate per 1000 population	42.1	33.6	15.0	13.1
Average Crude Death Rate per 1000 population	13.8	10.1	11.6	9.4
Average Rate of Natural Increase	2.8%	2.3%	0.4%	0.3%
Average Total Fertility Rate	6.0	4.5	2.1	1.7
Average life expectancy (years)	55	62	70	75
Average Infant Mortality Rate per 1000 births	104	63	18	10
Average percent of population under age 15	43	39	23	20
Average percent urban	40	43	64	74

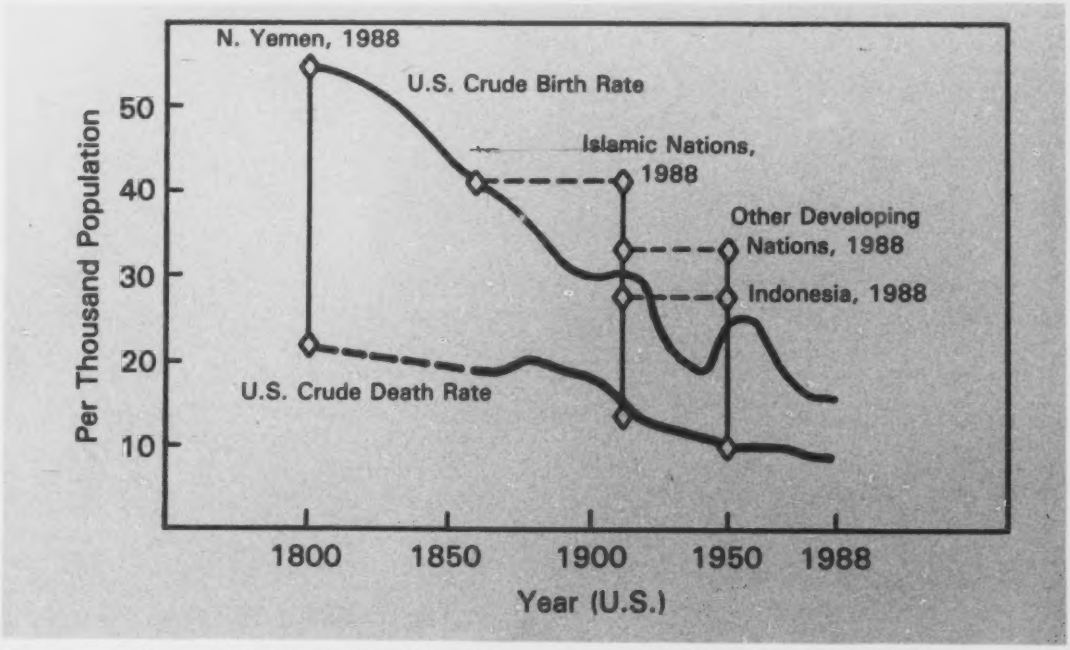
Note: Data are not available for all countries for each characteristic.

Source: Population Reference Bureau, *1988 World Population Data Sheet*

(North Yemen) and a low in Indonesia. In North Yemen, the crude birth rate (55 per 1,000) and crude death rate (22 per 1,000) are similar to the figures prevailing in the United States in 1800, and are probably representative of the demographic profile of the U.S. population at the time of the American Revolution. On the U.S. time scale, Indonesia's mortality level (CDR of 10 per 1,000) is a century and a half more modern, being comparable to the U.S. situation as recently as 1970, although the Indonesian crude birth rate (27 per 1,000) is more comparable to the U.S. experience just after the First World War. The average for other developing nations is much closer to the Indonesian conditions than it is to the Yemeni situation, as shown in Figure 2. Crude death rates are similar to those of the U.S. in 1970, whereas crude birth rates as high as 34 have not been experienced in the U.S. since the latter part of the 19th century.

This general demographic description of the nations of Islam can be rounded out by observing that the high rates of fertility lead to very young populations in Islamic nations—an average of 43 percent of the population is below the age of 15. This is higher than the average for other developing nations and is much higher than in countries with centrally-planned economies or in the more developed nations of the world. Islamic nations are also among the most rural in the world—averaging 40 percent urban—compared with 43 percent for other developing nations, and 74 percent in the developed nations. On the other hand, the presence of oil-producing nations in the Islamic world skews the national average per person income in Islamic nations. The high-income oil-exporting nations of Saudi Arabia, Kuwait, United Arab Emirates, Brunei, Qatar, and

Figure 2. The Demography of Islamic Nations Compared to Other Developing Countries and the Demographic Transition in the U.S.



Sources: U.S. Bureau of the Census; Population Reference Bureau, *1988 World Population Data Sheet*

Oman, by the way, statistically average $11,357 per person per year (not including Libya, for which income data are not available), which is almost identical to the per person income level of Western Europe ($11,380).

The seven nations in which oil is the major economic product are much smaller in population than the average Islamic nation—averaging only 3.4 million, compared with 24.2 million for the other Islamic nations—and they have slightly higher rates of population growth—2.9 percent compared with 2.8 percent for the non-oil-producing nations of Islam. However, the birth and death rates are somewhat different in the two income groups. In the oil-producing nations, the crude death rate is very low (averaging 6 deaths per 1,000 population), while fertility remains quite high (average crude birth rate of 36 births per 1,000 population). In other Islamic nations, fertility and mortality are both higher, with crude birth rates averaging 43 per 1,000 and crude death rates averaging 15 per 1,000. Overall, then, having income levels commensurate with Western Europe has not yet been accompanied in the Islamic oil-producing nations by comparably low levels of fertility and natural increase.

Fertility in Islamic Nations

The single most remarkable demographic aspect of Islamic societies is the nearly universal high level of fertility—the average level of childbearing in Islamic nations is 6 children per woman. In the following paragraphs, we will explore the levels and trends in fertility, examine the factors that help to explain the continuing high levels of fertility (as well as the declines occurring in some Islamic nations), and then look at the relationship between the status of women and fertility in Islamic societies.

Levels and Trends

Fertility rates are highest for those Islamic nations in sub-Saharan Africa—an average of 6.6 births per woman (see Table 4). Furthermore, African Islamic nations south of the Sahara have higher fertility on average than do the other developing nations in that region. Yet the total fertility rate (TFR) of 5.9 for non-Islamic African nations is still higher than the 5.5 average for North African nations, all of which are Islamic. (The TFR is the average number of children a woman will have assuming she follows current age-specific birth rates throughout the childbearing years between 15 and 49). It seems a sub-Saharan location is associated with high fertility, even though being Islamic also plays a role. In Western Asia, the Islamic nations' average TFR of 6.2 is well above the average of only 2.8 for the two non-Islamic countries in the

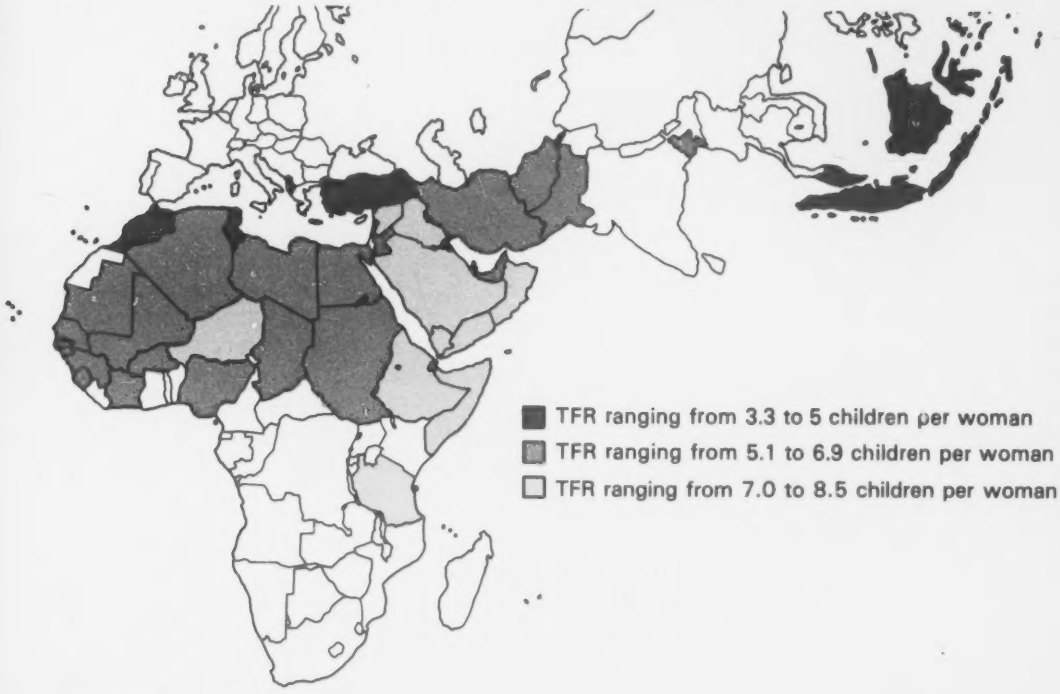
Table 4. Total Fertility Rate of Islamic Nations Compared With Other Developing Nations in the Same Geographic Region

Geographic Region	Islamic Nations		Other Developing Nations	
	TFR	(no.)	TFR	(no.)
North Africa	5.5	(6)	*	
Sub-Saharan Africa	6.6	(17)	5.9	(30)
Western Asia	6.2	(15)	2.8	(2)
South Asia	6.5	(4)	4.7	(4)
Southeast Asia	3.6	(3)	4.3	(8)
Europe	3.3	(1)	2.0	(6)**

* All North African nations are Islamic.
** Comparison is with countries with centrally-planned economies.

The Total Fertility Rate (TFR) is the average number of children a woman will have assuming she follows unchanged age-specific birth rates.

Figure 3. Total Fertility Rates in Islamic Nations, 1988


TFR ranging from 3.3 to 5 children per woman
TFR ranging from 5.1 to 6.9 children per woman
TFR ranging from 7.0 to 8.5 children per woman

Source: Population Reference Bureau, *1988 World Population Data Sheet*

region, Israel and Cyprus. In Southern Asia, it is also true that the Islamic nations exhibit higher average levels of fertility than do the non-Islamic nations. India has a numerically large Moslem population, but it represents only a small fraction of the total Indian population (an estimated 11 percent). Despite the widespread concern about high fertility in India, that nation's TFR of 4.3 is second lowest of the eight countries in that region—higher only than its close island neighbor Sri Lanka, where the total fertility rate in 1988 was 2.8.[9] Thus, in Western and Southern Asia, Islamic nations have clearly higher fertility than other countries in the region. Indeed, they appear to be more like one another than they are like the countries within their respective regions—a pattern somewhat different than that observed in sub-Saharan Africa.

In Southeast Asia we find still another pattern. The three neighboring Islamic nations of Indonesia, Malaysia, and Brunei have fertility levels that are well below those of other Islamic nations in the world as well as being lower than most other developing nations in their region. Finally, the European Moslem-majority nation of Albania has a TFR of 3.3—exactly the same as Indonesia. However, though Indonesia's fertility is lower than its regional average, Albania's is the highest of any European nation and is well above the average for the surrounding countries with centrally-planned economies.

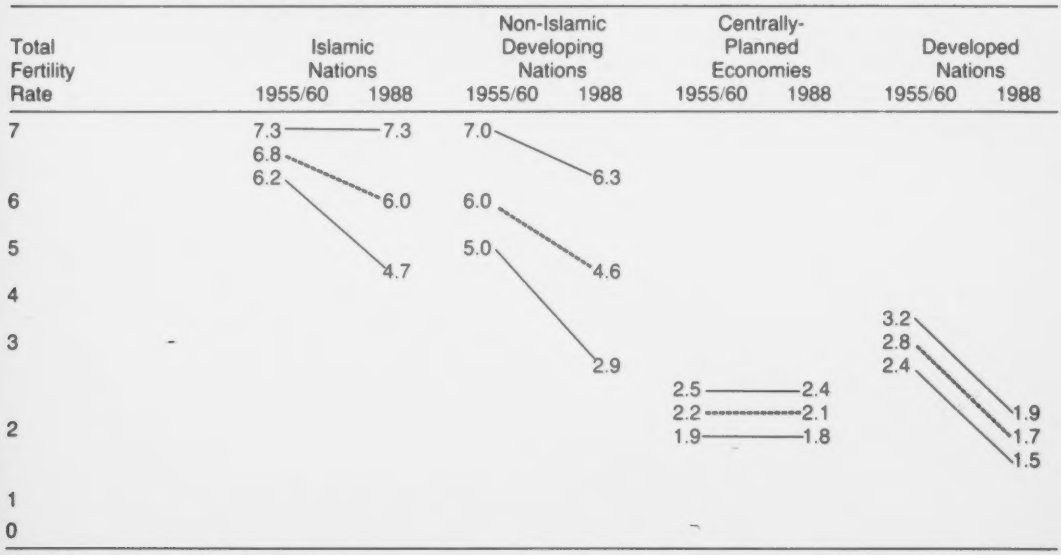
The variability in fertility levels is seen in Figure 4, showing the range in total fertility rates for two dates (1955/60 and 1988) for each of the major categories of countries that we have been using for comparative purposes. The range calculated is the mean (the arithmetic average) plus or minus one standard deviation unit away from the mean. This shows how widely scattered the coun-

tries within a grouping are around that category's average. For example, in the 1955/60 period the average TFR for Islamic nations was 6.8, and the Islamic nations clustered closely around that average. Within one standard deviation unit around the average were TFRs ranging from 6.2 to 7.3 lifetime births per woman. Thirty years later, in 1988, the average TFR in Islamic nations had dropped to 6.0, but the variability had increased, reflecting the fact that fertility was falling in some Islamic nations but not in others. During this period of time, fertility dropped substantially in the Islamic nations of Southeast Asia, as in other nations in that region. Fertility rates also declined noticeably in North African Islamic nations. There was some drop in Western Asia (about equally in Islamic and non-Islamic nations); there was a very small decline in fertility in Southern Asia among both Islamic and non-Islamic nations. Individually, three of the world's "top 20" fertility declines between 1955/60 and 1988 occurred in Islamic nations (Indonesia, Malaysia, and Tunisia), with two of those nations in Southeast Asia.

Figure 4 also shows that the other, non-Moslem developing countries experienced a steeper and more highly varied pattern of fertility decline than did Islamic nations. Countries with centrally-planned economies in Europe experienced almost no change in fertility during that 30-year interval, while the developed nations showed a marked decline and a lessening of variability in fertility levels among countries.

This noticeable regional and temporal diversity in fertility among Islamic nations reminds us that we make sweeping generalizations about the demography of Islam at our own peril. Nonetheless, having appropriately cautioned ourselves, an examination of the evidence concerning the reasons for the overall high levels of fertility in Islamic nations ensues.

Figure 4. Changes in Fertility Between 1955/60 and 1988 in Islamic and Non-Islamic Nations



Note: Center number is average TFR.

Sources: 1955/1960 from John A. Ross et al, *Family Planning and Child Survival: 100 Developing Countries* (New York: Columbia University, Center for Population and Family Health, 1988) Table 3; United Nations, *1964 Demographic Yearbook* (New York: United Nations, 1965); 1988 data from Population Reference Bureau, *1988 World Population Data Sheet*

Explanations of Fertility Levels

In order to understand high fertility anywhere in the world, it must be remembered that all nations that have survived to the present day did so by overcoming the historically high levels of mortality. Only within the relatively recent past have residents of the developed societies been able to take a long life for granted, and citizens of many developing societies (especially in sub-Saharan Africa, Western Asia, and Southern Asia) are still struggling to reach that point. Although we do not have good historical data for most of these countries, we do know that as recently as the beginning of this century, life expectancy at birth in India was no more than 20 years.[10] At this level, approximately 4 of every 10 babies born would die before reaching their first birthday, and 6 out of 10 would die before reaching adulthood.[11] Although death rates have improved substantially everywhere in the world, the social structures that support high fertility were developed over centuries of coping with the incredible riskiness of life. Those societies that did not match high mortality with high fertility did not make it into the modern world.

It is unlikely, of course, that a council of community elders sat around discussing ways to maintain high fertility. Rather, over time, many societies adapted to high mortality by encouraging youthful marriages and an early start to childbearing within marriage, and building in a variety of inducements to have children. As Kingsley Davis has noted, childbearing is rarely an end in itself.[12] Generally, it is sought as a means to some other end, such as expanding the ego, proving gender roles, continuing a family lineage and descent group, handing on property, securing economic welfare in old age, guaranteeing future family labor, or satisfying the believed demand of God. Underlying all of these reasons is perhaps the most important motivation of all—the desire for social approval. When a community believes that parenthood is important, it rewards parents with its most precious commodity—the approval of others. Equally important is the threat of rejection if we fail to meet society's expectations. To ensure that a sufficient number of children is born, virtually every human group has institutionalized pronatalist pressures—pressures to marry and procreate—which tend to be pervasive, subtle, and usually taken for granted, so much so that the decision to bear children is often misconstrued as "voluntary." Nothing could be further from reality.[13] We are socialized from birth to learn the rules of childbearing and believe that they are right, and this is reinforced by everyday life that puts us in contact with the norm-enforcement process, since other people have a keen interest in how we behave.[14]

This all adds up to the fact that high fertility is not so hard to understand if one recognizes that it represents the maintenance of a previously viable pattern of social behavior. Men and women for centuries have grown up expecting and wanting large families, and in many communities those expectations and desires persist because there have been insufficient changes in society to warrant a renegotiating of these behavior patterns. What is required for such a change? Ansley Coale has laid out what he calls the three preconditions for a substantial fertility decline. These include (1) the acceptance of calculated choice as a valid element in marital fertility; (2) the perception of advantages from reduced fertility; and (3) knowledge and mastery of effective techniques of fertility control.[15]

"Calculated choice" refers to a person's belief that they themselves have control over their bodies and over the number of children they have, rather than children coming along according to the "will of God" or according to some other Fate or Spirit beyond human intervention. Islam is frequently said to be opposed to the use of contraceptives be-

Pilgrims making the Haj *in Mecca, Saudi Arabia. The special garments worn by all eliminate differences and promote the communality of Islam.*

cause of the belief among its faithful that children are the "will of God," and that somehow the childbearing decision is thus out of human hands. However, this is a world view shared by many people of various religious backgrounds. Islam itself seems not to impose constraints on the use of contraception (although there are some objections to abortion and sterilization, as discussed below). "Summarizing Islamic opinion in 1971, Sheikh al-Sharabussy of Al-Azhar University [in Cairo] referred particularly to Ibn al-Qayyem and al-Ghazali and cited five situations in which contraception was acceptable to Islam."[16] These included: (1) the affliction of either of the (married) partners with a contagious disease which could be transmitted to the children with dire consequences of wretchedness and misery; (2) natural disposition on the part of the wife to have pregnancies in quick succession, which she is too weak to sustain; (3) concern for the health and life of the wife from too frequent pregnancies, if she is suffering from a malady that might be aggravated or caused by such pregnancies; (4) the husband's inability to meet the needs and demands of too many children; and (5) the safeguarding of a wife's beauty. The fourth situation—dealing with the economic burden of too many children—is probably most relevant to the modern world and is in keeping with Islam's general premise of trying to reduce hardship among its followers.

In general, then, Islamic scholars seem to agree that Islam itself prescribes no special barriers to the use of contraception; couples are granted the ability to exercise some control over reproduction.[17] Of course, that does not prevent rural peasants, urban villagers, or even clergymen themselves from raising objections to fertility control for a variety of reasons that may be labeled as "tradition" rather than "religion." In fact, uneducated women may believe that their bodies belong to their husbands, not to themselves, and that it is simply an unquestioned duty to bear the husband's children.[18] Peasants may be slow to yield on this issue, regardless of their ethnic background or religious preference; in European and American demographic history, secularization (aided especially by mass education) has been an important precursor of the attitude that individuals or couples can make their own decisions about family size.[19]

The world view of peasants as defined by George Foster in describing Mexican peasants can be analogously applied to Moslem peasants—they live under the mercy of nature and the supernatural as well as under the mercy of the urban elite, to whom they are often beholden.[20] Life is not under their control. It *is* dictated by forces beyond their direction, and as Laila El-Hamamsy has written in reference to rural Egyptians:

> It is not surprising that the Moslem peasant, living so precariously, should decide that fate, as determined by Allah, is responsible not only for the pleasures and good things of life, but also for its misfortunes and pain . . . Surely life would be insupportable were the peasant to

believe himself responsible, by his own deeds and efforts, for all that befalls him.[21]

History suggests that both social and economic development are required to lessen the threats that peasants (both rural and urban) perceive in their surroundings, allowing them to take control of their lives in ways that lead to decisions about family size. Typically such decisions lead to a limitation of fertility, regardless of religious background.

Even if people believe that reproduction is within their individual control, they may not be motivated to reduce their level of reproduction. For example, the Kenya Fertility Survey in 1977 (part of the World Fertility Survey) showed that among currently-married Moslem women in that country, the average desired family size was 8.4 children! This was the highest of any religious grouping, with Catholic women preferring an average of 7.1 children, and Protestant women an average of 7.0.[22] Clearly, women in Kenya wanted large families, regardless of whether or not they were Moslem. Two years earlier, the Sri Lankan Fertility Survey had revealed that currently-married Moslem women in that country expressed a desire for a family of 4.2 children. Buddhists preferred 3.9; Hindus preferred 3.8; and Christians expressed a desire for 3.4 children. Thus, although Moslem women preferred larger families than did members of other religious groups, it was also true that, regardless of religious preference, women in Sri Lanka wanted fewer children than did women in Kenya. Sri Lanka has experienced an earlier initiation into modernization than Kenya, including a fairly rapid decline in mortality, which accelerated the rate of population growth. Since the nation is an island, the negative consequences of rapid population growth show up perhaps more quickly than in a geographically more vast area such as East Africa. Sri Lankans have responded by lowering their expectations of fertility and the actual number of children they are having, while such a response has not yet occurred in Kenya. In Lebanon, Joseph Chamie found in 1971 that Moslems had higher fertility than Christians, but within each group there were observable differences. Catholics had higher fertility than non-Catholic Christians, while Shiite Moslems had higher fertility than Sunni Moslems.[23]

Only when people believe they can control their fertility and have a motivation to limit the number of children, will they seek the means to do so. In the meantime, of course, a variety of social mechanisms have kept fertility well below the biological maximum of about 15 live births per woman. Girls do not all become mothers as soon as it is biologically possible. Indeed, a few never marry at all, some have partners who cannot father children, and others will have their marriage disrupted by divorce or widowhood. Some women have difficulty conceiving or carrying a child to full-term, sometimes as a result of sexually-transmitted diseases. Children are typically spaced farther apart than would be biologically necessary (usually due to prolonged breastfeeding that delays the onset of ovulation). Even in the absence of modern contraceptives, ancient methods such as withdrawal reduce the risk of pregnancy, and abortions (either spontaneous or induced) have for centuries prevented some pregnancies from successful gestation.[24] Among all of these factors, John Bongaarts has shown that variations in fertility from one country to another can be largely accounted for by the following four factors he identified as proximate determinants: proportion married (especially at the younger ages), use of contraceptives, incidence of abortion, and involuntary infecundity (especially postpartum fecundity as affected by breastfeeding practices).[25]

Since virtually all women in nearly all developing societies marry, the important impact on fertility is derived from their age at marriage. Table 5 shows that, for those countries for which such data are available, an average of 34 percent of all brides in Islamic nations in

recent years have been under 20 years of age. This is notably higher than the average of 23 percent for other developing countries, 27 percent for nations with centrally-planned economies, and only 12 percent in developed societies. As always, however, our interpretation of these findings has to take regional and ethnic diversity into account. Among North African Islamic nations, the average percentage of teen-aged brides was 43, compared with 39 percent in Western Asian Islamic nations and only 13 percent in Southeast Asian Islamic nations (no data were available for countries in sub-Saharan Africa).

Saad Gadalla has found that "early female age at marriage has been and still is a deeply rooted cultural norm in Egyptian villages, and it seems unlikely that this norm will change unless some strong social forces are introduced into the rural culture to make late marriages for women more desirable."[26] Any such forces would have to overcome two enduring features of life in peasant societies: (1) the feeling on the part of most villagers that marriage and childbearing are the most important functions in a woman's life, thus there is little benefit in keeping their daughters unmarried; and (2) the fear on the part of parents that their daughters might get involved in premarital sexual relations or become sexually promiscuous if they do not marry early. Once married, of course, there is immediate pressure to bear a child, in order especially to prove the wife's fecundity to her husband's family (and to herself). Youthful marriage is thus part and parcel of the traditional family system, reinforced by (but not necessarily caused by) Islam. Its underlying purpose is not only to enhance fertility, but it has that result.

We were also able to summarize data on the proportion of women aged 15-19 who are married, according to the most recent census or survey. The data in Table 5 show that in Islamic nations nearly twice the percentage of teen-aged girls is married compared to other developing nations. Furthermore, we can observe that in every regional comparison, nations of Islam have a higher percentage of girls aged 15-19 who are married than do the non-Islamic nations in the same region. These comparisons are summarized in Table 6 and Figure 5.

Regional differences can again be seen to be as important as religion in explaining fertility levels. Sub-Saharan African and Southern Asian nations tend to have high proportions of teen-aged

Table 5. Proximate Determinants of Fertility in Islamic and Non-Islamic Nations

Determinant of Fertility	Islamic Nations	Other Developing Nations	Centrally-Planned Economies	Developed Nations
Percent of brides who are under age 20	34	23	27	12
Percent of women 15-19 who are married	35	19	10	3
Percent of married women using some method of contraception	22	39	69	70
Percent of women who were still breastfeeding their last baby at age 12 months	60	57	—	—

Sources: United Nations, *1982, 1984, 1986, 1988 Demographic Yearbook* (New York: United Nations); John A. Ross et al, *Family Planning and Child Survival: 100 Developing Countries* (New York: Columbia University, Center for Population and Family Health, 1988)

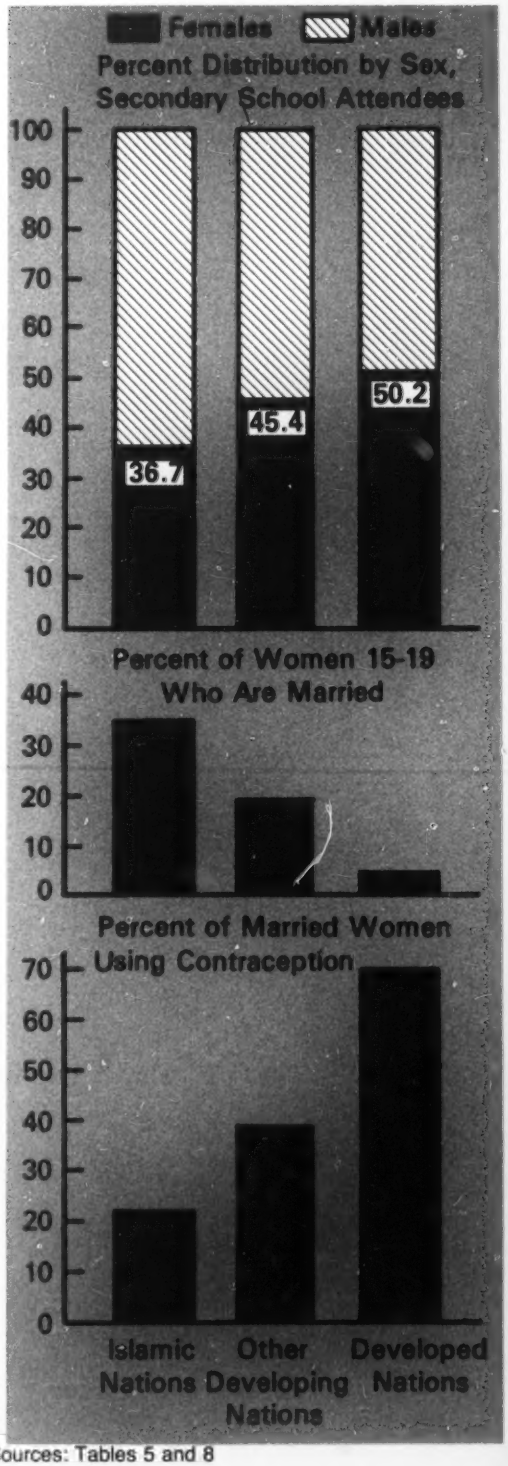
rearing, and their motivation to limit family size may not be as strong as that of a woman.

Currently-married women in Islamic nations are only half as likely as currently-married women in other developing nations to be using some form of contraception, as shown in Tables 5 and 6, and Figure 5. Furthermore, in all three regions (sub-Saharan Africa, Southern Asia, and Southeast Asia) in which there are both Islamic and non-Islamic nations, the percentage of currently-married women who are contraceptors in Islamic nations is lower than the percentage in non-Islamic nations (see Table 6). Again, note the considerable regional diversity in contraceptive use for both Islamic and non-Islamic nations.

An analysis was undertaken to see if it was possible to determine statistically whether being an Islamic nation was more important than being in a particular geographic region in terms of explaining the differences between countries in the percentage of women using contraception, restricting our analysis to developing nations. Our results showed that the most important factor explaining the between-country differences in contraceptive use was a geographic one; specifically, whether the country was in sub-Saharan Africa (regardless of whether the nation was Islamic).[32]

Sub-Saharan nations have a far lower percentage of currently–married women using contraceptives than do developing nations elsewhere in the world, and this pattern holds for Islamic and non-Islamic nations alike. However, outside sub-Saharan Africa, being an Islamic nation is a more important factor than geographic region in explaining the different percentages of contraceptors from one country to another. Identical results were found in an assessment of whether being an Islamic nation or being in a geographic region was more important in explaining country-to-country differences in the percentage of teen-aged women who are married. Being a sub-Saharan African nation was also more important than

Figure 5. The Status of Women



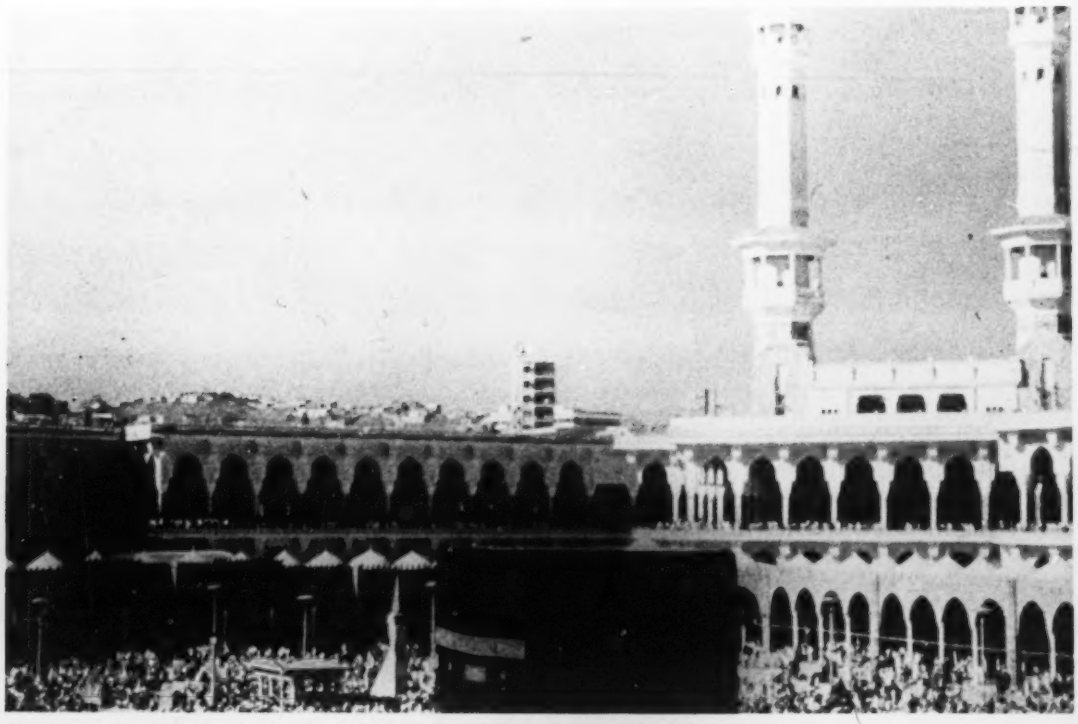
Sources: Tables 5 and 8

being an Islamic nation, but outside sub-Saharan Africa, being an Islamic nation is more important than being in one of the other geographic regions.

Data on abortions are very scarce for developing nations, but those that have been published suggest that, excluding China, the abortion ratio (the number of abortions per 100 known pregnancies—defined as abortions plus births that occurred six months later) in developing societies of Asia and Africa are well below the rates in Europe and the United States. It is reported that in 1983 the abortion ratio in the United States was 30 abortions per 100 pregnancies, while it was 68 in the USSR in 1982 and 43 in China in 1983.[33] By contrast, the ratio in Bangladesh in 1984-85 was reported to be only 1.5 abortions per 100 pregnancies, while the figure for India in 1983-84 was 2.1, and for Tunisia in 1985 it was 9 per 100.

There is concern, however, in many developing nations, including Islamic nations, that clandestine abortions are fairly frequent and may be an explanation for high maternal mortality rates (discussed below).[34] In general, Islamic nations permit abortion for medical reasons, although two Islamic nations (Tunisia and Turkey) permit abortion on request, whereas there are four Islamic nations (Burkina Faso, Côte d'Ivoire, Mauritania, and Niger) in which abortions are illegal and there are no exceptions.[35] A shortage of adequate medical facilities and trained personnel almost certainly limits a woman's access to a safe abortion even in those countries where it is permitted.

Finally, with respect to Bongaarts' fourth proximate determinant of fertility, breastfeeding, Table 5 shows that there is little difference between Islamic and non-Islamic developing nations in the percentage of women who were still breastfeeding their most recent baby when the child was 12 months old. This lack of difference between Islamic and



The Great Mosque and the Kaaba in Mecca, Saudi Arabia, during the Haj.

non-Islamic nations was observed across all geographic regions, but there were also some important regional differences in breastfeeding patterns. In particular, African and Southern Asian women were more likely to prolong breastfeeding (with an average of 73 percent of women still breastfeeding their child at 12 months); Western Asian women were least likely to do so (an average of 26 percent of women still breastfeeding at 12 months), with women in Southeast Asian nations falling in between those two extremes (55 percent).[36]

Having evaluated the motives leading to fertility control and the means whereby those motives may be implemented, we conducted a statistical analysis to assess how well a nation's status as Islamic or non-Islamic could predict that nation's total fertility rate, taking into account the proximate determinants of fertility, including contraceptive use and youthful marriages, and controlling for geographic region. Our analysis revealed that contraceptive use is by far the most important of these variables in explaining between-country differences in fertility levels. After controlling for contraceptive use, the proportion of young women who are married, and geographic region, there was nothing else unique about Islamic nations that could explain the differences in fertility.

The Status of Women

There is widespread agreement among Western demographers that the status of women can be an important determinant of fertility levels.[37] One definition of the status of women is Ruth Dixon's, based on the degree of women's access to and control over material and social resources within the family, community, and society in general.[38] Worldwide data show that high fertility persists in areas where the status of women is low, and low fertility persists in areas where the status of women is high. Revisions of the theory of the demographic transition have taken into account the fact that the rising status of women can generally be an effective spur to economic development and growth, partly by generating motivations for smaller families. Women tend to gain status by engaging in activities formerly reserved for men—especially obtaining an education, engaging in non-agricultural labor force activities, and becoming involved in social and political organizations. These activities generally compete with childbearing and childrearing, and the motivation to limit family size becomes well entrenched, even though pronatalist pressures continue everywhere to encourage having children. History records emphatically that when people are sufficiently motivated to limit family size, they find the means to do so, although it is obviously far easier when efficient modern methods of fertility control are available.[39]

An improvement in the status of women does not depend upon economic development—although that often helps, nor is it typically an individual option in the absence of a broad-based social consensus. It usually comes about as a result of a concerted collective effort within a community. This appears to have happened in Tunisia, as an example. After gaining independence from France in 1956, a personal status code was enacted in the areas of marriage, divorce, and children's rights and women were permitted to vote.[40] These changes were promoted personally by President Habib Bourguiba, who actively championed the advancement of women. Insight into the mechanisms of social change in Tunisia can be gained from the following comment made in the late 1970s by the wife of a village leader:

> 'Tell me what differences you see between your life and those of your daughters.'
>
> 'There's a big difference between my life and theirs. I couldn't even go to town in my day. Now my daughters go about here and there. We didn't get to meet our husbands until we were married. They just gave us a husband we didn't know. Of course I have learned things also during these new times.

I kept hearing things around me so I began to learn hygiene, how to better care for my children, how to give them an education different from my own. We all began to imitate each other, and that is how we changed our old habits. Nowadays it is much better, better at all levels.'

'What brought about these changes?'

'It was Bourguiba. Where else do you think it come from? Now, women are free. They can go where they want. Men can't say anything. They can't keep women from doing what they want. Women are free, and women are just as capable as men. They are equal.'[41]

An ambitious, government-sponsored family planning program has made modern contraceptives and sterilization and abortion procedures available to a large segment of the Tunisian population.[42] In response, the total fertility rate has dropped from 7 births per woman in the 1960s to 4.4 births per woman by 1988. Among Middle Eastern Islamic nations, only Lebanon now has a lower rate of fertility. It is certainly not a coincidence that data from the World Fertility Survey show that the highest age at marriage among Middle Eastern Islamic nations was in Tunisia (24 years), while the youngest age at marriage was found in the Yemen Arab Republic (17) which has the region's highest fertility level (a TFR of 8.2 in 1988).[43]

Islam itself does not impose any particular restrictions on labor force activity by women (the Prophet Mohammed's wife was a successful trader), but tradition has tended to impose itself in many Islamic nations. In virtually every Islamic nation there are growing numbers of women who are well-educated and/or are engaged in non-domestic, non-agricultural labor force activities. Depending upon the force of tradition in the specific country, such women may or may not represent the cutting edge of a rise in the status of women. In some Islamic nations, opportunities for women within the framework of a generally gender-segregated society have included the establishment of gender-segregated universities and gender-segregated occupational structures (training women to serve the female population—as teachers or physicians, for example).

On a regional basis it is difficult to find enough data measuring the status of women for enough countries to make worthwhile comparisons. One important element is the ratio of girls to boys enrolled in secondary schools. Although we do not have good data for most developing societies on completed levels of education, the current school enrollment patterns should be very suggestive about future educational outcomes. Table 7 points up the fact that in Islamic nations there are only 58 girls for every 100 boys enrolled in secondary education. In non-Islamic developing nations, girls are less disadvantaged, with a ratio of 83 girls per 100 boys. Developed nations have virtual equality with a ratio of 101 girls per 100 boys, and males are actually at a disad-

Table 7. Indicators of the Status of Women in Islamic and Non-Islamic Nations

	Islamic Nations	Non-Islamic Developing Nations	Centrally-Planned Economies	Developed Nations
Ratio of girls per 100 boys enrolled in secondary schools	58	83	184	101
Ratio of female life expectancy at birth to male life expectancy at birth	106	107	111	108

Sources: United Nations, *Demographic Yearbook,* various years; John A. Ross et al, *Family Planning and Child Survival: 100 Developing Countries* (New York: Columbia University, Center for Population and Family Health, 1988)

Table 8. Indicators of the Status of Women in Islamic Nations Compared With Other Developing Nations in the Same Geographic Region

Geographic Region and Indicator	Islamic Nations ratio	(no.)	Other Developing Nations ratio	(no.)
Ratio of girls per 100 boys enrolled in secondary schools				
North Africa	72	(4)	*	
Sub-Saharan Africa	45	(11)	63	(19)
Western Asia	65	(11)	126	(1)
South Asia	36	(2)	56	(4)
Southeast Asia	86	(2)	91	(4)
Ratio of female life expectancy at birth to male life expectancy at birth (x 100)				
North Africa	106	(6)	*	
Sub-Saharan Africa	106	(13)	107	(23)
Western Asia	105	(11)	105	(1)
South Asia	98	(2)	99	(4)
Southeast Asia	105	(2)	106	(6)

* All North African countries are Islamic.

Sources: United Nations, *Demographic Yearbook*, various years; John A. Ross et al, *Family Planning and Child Survival: 100 Developing Countries* (New York: Columbia University, Center for Population and Family Health, 1988)

vantage educationally in countries with centrally-planned economies.

Table 8 shows that women in Islamic nations are at a disadvantage with respect to school enrollment in comparison with other developing nations in each different geographic region. But, again, we find that regional differences are more pronounced than the within-region difference between Islamic and non-Islamic nations. For example, using secondary school enrollment as an index to the status of women, it is clear that women are faced with the lowest status in Southern Asia (comprising essentially the entire Indian sub-continent) regardless of whether they live in a predominantly Islamic or predominantly non-Islamic society. At the other extreme among developing nations, female secondary education is at its highest in Southeast Asia, regardless of whether the women live in an Islamic nation.

A more subtle indicator of the status of women is the comparison of their life expectancy with that of men in the same nation. In most human societies, more male babies are conceived than females and, although fetal mortality is higher for males than females, there are usually about 105 male births for each 100 female babies born alive. Given equal access to food, shelter, clothing, and health care, women will experience lower risks of death than men at every age. The evidence is strong enough to suggest a type

of biological advantage to women, perhaps related to the hormonal system. Thus, when and where we find that females are at greater risk of dying than men, or that the difference is minimal, the inference is that women are not being provided equal access to the community's resources. This probably reflects differential infant mortality among female babies who may not be as highly prized and thus not as carefully nursed in infancy. This is an indirect index, then, of the status of women in society.

As shown in Table 7, the differences in the ratio of female to male life expectancy are not large from one group to another, although the ratio is lowest in Islamic nations. Regional comparisons of mortality ratios show that women in Islamic nations are, on average, at a disadvantage compared to women in non-Islamic countries in the same region, but women are at the greatest disadvantage in Southern Asian nations, regardless of whether the nation is Islamic. This is the same conclusion we drew when examining school enrollment as an index of status.

Using the types of data that we have just discussed, in addition to other related variables dealing with health, education, fertility, and labor force activity, the Population Crisis Committee in "Poor, Powerless, and Pregnant" has constructed an index of the status of women for 99 countries of the world, including 23 of the Islamic nations.[44] Each country was given a score between 1 and 5 on 20 different indicators of the status of women, with number 5 equaling the highest status for women. The figures were then added to produce an overall index between 20 (lowest status) and 100 (highest status). The highest score (87) was found for Sweden and, in fact, 19 of the top-scoring 20 countries were developed nations or European countries with centrally-planned economies; the single exception was Jamaica. The lowest-ranked country was Bangladesh (with a score of 21.5), and 16 of the lowest-scoring 20 were Islamic nations. Even within the same region, Islamic nations received lower scores than non-Islamic nations (see Table 9). In general, however, the data confirm our previous assessment that women are least advantaged in sub-Saharan Africa and Southern Asia, regardless of religious affiliation.

The relatively low status of women in Islamic nations is not a static situation. In recent years fertility has dropped in Jordan and Kuwait almost entirely as a result of a delay in marriage.[45] Delaying marriage may permit a young woman to develop alternatives in her life to a large family, and it may reduce the difference in age between her and her husband, thus leading to a greater chance that communication might occur over the issue of family size and fertility control. Another small sign of change was noticed in a survey of Palestinian refugees on the West Bank of the Jordan River. Although only 50 percent of young wives in the survey had ever talked to their husbands prior to marriage, that was higher than the 30 percent recorded for

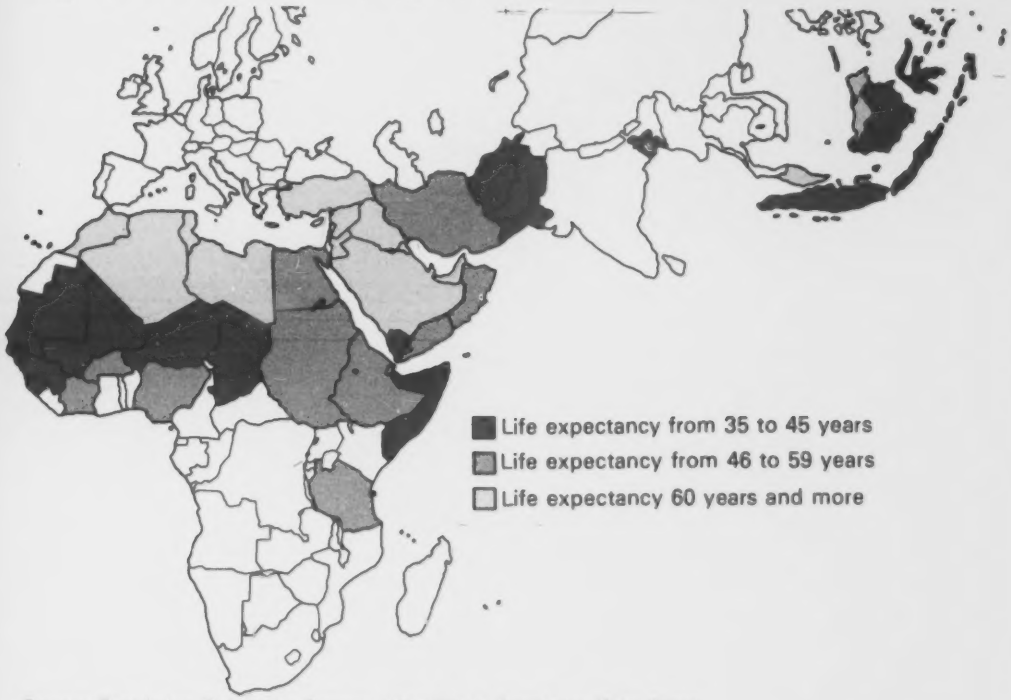
Table 9. Status of Women Scores in Islamic Nations Compared With Other Developing Nations in the Same Geographic Region

Geographic Region	Islamic Nations		Other Developing Nations	
	score	(no.)	score	(no.)
North Africa	40	(6)	*	
Sub-Saharan Africa	32	(4)	43	(12)
Western Asia	42	(8)	71	(1)
South Asia	25	(3)	47	(3)
Southeast Asia	52	(2)	63	(3)

* All North African nations are Islamic.

Source: Population Crisis Committee, 1988

Figure 6. Life Expectancy at Birth in Islamic Nations, 1988



Source: Population Reference Bureau, *1988 World Population Data Sheet*

older wives in the survey. Furthermore, younger wives were much more likely to have completed secondary school than older wives, and the younger women were nearly as likely as their husbands to have completed secondary school.[46]

Whether the impetus comes from a change in the status of women or from some other source, fertility throughout the Islamic world is not declining in parallel with the improvements in mortality that have been occurring.

Mortality in Islamic Nations

Islamic nations as a group have the world's highest levels of mortality; however, death rates all over the world have been dropping fairly steeply since the end of World War *II*. The two "deadliest" areas of the world—the western coast of Africa just south of the Sahara, and the Horn of Africa with the southern part of the Arabian peninsula—are predominantly Islamic regions. On the western coast of Africa the Islamic nations of Gambia, Guinea, Guinea-Bissau, Senegal, and Sierra Leone have a combined (unweighted) average life expectancy in 1988 of only 40 years. Directly east on the Horn of Africa, the Islamic nations of Djibouti, Somalia, the Yemen Arab Republic, as well as Ethiopia, have a combined average life expectancy in 1988 of 46 years. As harsh as those numbers are, compared with more than 75 years in Japan and many Western European countries, they represent a substantial improvement in the years since most of these nations have gained independence from Europe. In 1960, when life expectancy in the United States hovered at 70, it was only 34 in West Africa and 36 in the countries of the Horn of Africa. Throughout the developing world, the epidemi-

ological transition has been occurring as improved standards of living conditions have reduced deaths from communicable diseases.[47] As always, infant mortality rates fall the fastest during the onset of mortality decline. In the Islamic nations on the western coast of Africa, the infant mortality rate declined from an average of 212 per 1,000 live births in 1960 to 153 currently. This means that in 1988, 59 more children out of every 1,000 born that year were surviving to their first birthday than had survived 28 years before in 1960. From the standpoint of the community, it was equivalent to the birth rate having increased by that amount. To the east, the Islamic nations on the Horn of Africa and in the southern Arabian peninsula witnessed a drop in the infant mortality rate from 199 per 1,000 births in 1960 to 153 in 1988—a nearly identical increase of 56 more babies per 1,000 surviving to age one in recent times.

There can be no question, however, that the high death rates in these equatorial Islamic nations have little, if anything, to do with Islam. The reasons are found in poverty and underdevelopment, with the lack of sufficient resources to improve the health profile and living conditions any faster than is already being done. One way to assess this is to compare mortality indices in Islamic and non-Islamic nations according to per person income levels. The median (the mid-point of the distribution; not the arithmetical average) per person income among non-oil-producing Islamic nations is approximately $500, used as a somewhat arbitrary dividing point for a comparison of mortality indicators. Life expectancy in those Islamic nations with average per capita incomes under $500 is only 47 years, compared with 62 in the nations with a per person income of $500 or more per year (see Table 10). This is the same pattern found in non-Islamic developing nations.

Infant mortality rates as well as maternal mortality rates (pregnancy and childbirth-related deaths) are also highly sensitive to national income levels, as Table 10 shows. Among Islamic nations, the infant mortality rate is 138 per 1,000 births for the lower-income nations, and 74 for the higher-income nations, while maternal mortality rates average 642 per 100,000 live births for the lower-income Islamic nations and 442 for the higher-income Islamic nations.

Death and disease have few religious

Table 10. Mortality Indicators by Income Level for Islamic and Non-Islamic Nations

Mortality Indicator and Income Level	Islamic Nations	(no.)	Non-Islamic Developing Nations	(no.)
Life expectancy at birth				
average per person income:				
less than $500/year	47	(17)	53	(23)
$500 or more/year	62	(19)	66	(51)
Infant mortality rates/1,000 births				
average per person income:				
less than $500/year	138	(17)	102	(23)
$500 or more/year	74	(19)	48	(51)
Maternal mortality rates/100,000 births				
average per person income:				
less than $500/year	642	(11)	500	(18)
$500 or more/year	442	(11)	173	(32)

Sources: United Nations, *Demographic Yearbook*, various years; John A. Ross et al, *Family Planning and Child Survival: 100 Developing Countries* (New York: Columbia University, Center for Population and Family Health, 1988)

Table 11. Life Expectancy in Islamic Nations Compared With Other Developing Nations in the Same Geographic Region

Geographic Region	Islamic Nations years	(no.)	Other Developing Nations years	(no.)
North Africa	60	(6)	*	
Sub-Saharan Africa	45	(17)	53	(30)
Western Asia	62	(15)	75	(2)
South Asia	51	(4)	56	(4)
Southeast Asia	65	(3)	58	(8)

* All North African countries are Islamic.

Source: Population Reference Bureau, *1988 World Population Data Sheet*

determinants, of course. In general, death rates remain higher than the world average throughout the developing world because of the continuing high prevalence of infectious and parasitic diseases and the high prevalence of malnutrition (especially among infants and children). These causes of death are compounded by unclean water supplies, unsanitary waste disposal, poor housing, living in the midst of disease-transmitting insects and rodents, and inadequate personal and food hygiene.[48] A generally unhealthy environment is matched by the inadequate supply of trained people, services and institutions to meet the virtually overwhelming need for medical assistance—especially health care for mothers and children.

Morbidity and mortality levels vary by region, somewhat independently of income levels, since some geographic zones are by nature less hazardous to health than others. In Table 11 you can see that, outside of Europe, the highest life expectancies in Islamic nations are found in Southeast Asia, followed in order by Western Asia, North Africa, South Asia, and sub-Saharan Africa. The same pattern prevails for infant mortality rates and maternal mortality rates.

Maternal mortality has recently come under renewed scrutiny as researchers gradually became aware that the successful diminution of this cause of death in developed nations has not been accompanied by a parallel decline in developing societies. Part of the explanation lies in the prevailing high levels of fertility and part lies in the access that a woman has to health care services during pregnancy. Even in developed societies, the risk of death associated with a pregnancy is greater than the risk of death associated with contraceptive use.[49] The fact that women in developing societies put themselves at risk more often with more pregnancies helps to explain the higher death rate associated with pregnancy and childbirth. In a comparative study of maternal mortality in Egypt and Indonesia, Judith Fortney and her associates found that the profile of causes of death in the two countries was quite similar, with complications of pregnancy leading the list in both nations.[50] However, in Indonesia, where fertility has been declining, it appears that using contraception and limiting the number of pregnancies was a major factor in explaining differentials in maternal mortality; whereas in Egypt fertility has remained high, but there is greater access to maternity hospitals where adequate care can be obtained. Societies which have been able to combine lower fertility with good maternal care thus have the lowest levels of maternal mortality. For example, the researchers calculated that, relative to population size, the maternal mortality rate in Egypt is 48 times that in the United States, and in Indonesia it is 77 times as high.

In discussing the status of women, we referred to the fact that in a few countries males still have a higher life expectancy than females. In the last decade, there were six countries in which this was true—Bangladesh, Bhutan, India, Iran, the Maldives, and Nepal.[51] Half are Is-

lamic; half are not. More important is the fact that they are all either in Southern Asia or (in the case of Iran) contiguous to it. Sri Lanka, also in Southern Asia, had followed this pattern until recently and demographers Eduardo Arriaga and Peter Way of the U.S. Bureau of the Census have concluded that the higher female mortality in Sri Lanka was due to causes of death associated primarily with nutritional deficiencies.[52] These factors are related more to the status of women than they are to other prevailing diseases. The data also suggested that maternal mortality, per se, did not contribute significantly to the gender gap in mortality in Sri Lanka.

Today, more than one-third (36 percent) of the nations of the world have attained a life expectancy at birth of 70 years or more. This includes all of the developed nations, virtually all of the centrally-planned economies of Eastern Europe, and 30 percent of the non-Islamic developing nations. However, only three Islamic nations have achieved that level—Albania (in Europe), Brunei (in Southeast Asia), and Kuwait (in Western Asia). It is obvious, then, that there is still room for dramatic improvement in health levels and life expectancy throughout the Islamic world. As these improvements occur (as they almost certainly will), the population pressure will increase in these nations, pushing some people to migrate in search of other opportunities.

Migration in Islamic Nations

Migration has been a fairly common aspect of Islamic life for centuries. The Islamic calendar begins on the date that the Prophet migrated from Mecca to Al-Medina. The Haj itself represents a significant journey, even with the advent of modern transportation, and although it cannot be defined as migration itself, the pilgrimage has almost certainly influenced migration over the years by introducing Moslems to new lands and new opportunities.[53] Over the decades, of course, the political boundaries of virtually all of the Islamic nations of the world have changed so often that what in this year might be internal migration would have been international migration 50 years ago, and vice versa. Lebanon's current civil war traces its roots back to centuries of in- and out-migration of members of different religious groups, including Sunni Moslems, Shiite Moslems, Druze (a group that originated in Islam), Maronite Christians, and Greek Orthodox Christians.

In recent decades there have been three important aspects of migration in Islamic nations that we will examine briefly in this section: (1) guest-worker international migration; (2) urbanization; and (3) refugees in Islamic nations.

Guest-worker International Migration

The end of World War II found European nations trying to rebuild economically in the midst of a labor shortage caused by low birth rates during the Depression years and high male mortality during the war. They turned for labor to their colonies or former colonies. In many instances, granting independence to colonies itself produced an outflow of migrants from those colonies to Europe—Pakistanis to the United Kingdom, Algerians to France, Indonesians to the Netherlands. Others were later recruited to go to Europe as temporary "guest-workers," but have stayed as permanent residents. Migration from developing nations to Europe and the United States has typically involved a disproportionate number of well-educated professionals, contributing to the much-publicized "brain drain," which in some cases has further complicated the process of economic development in the sending nations. In Northern Africa the stagnating economies have combined with high rates of population growth to produce

rampant underemployment, especially among younger men trying to enter the labor force. The age structure of Europe, of course, is the mirror image of Northern Africa—there is a vacuum of those at the usual age for labor force entry in Europe which the youthful population of Northern Africa can easily fill. As a result, the fairly easy trip across the Mediterranean to Europe (usually to the former colonial power) is being made by an increasing number of migrants: legal and illegal. It is a situation that has been likened to the migration stream between Mexico and the United States.[54]

One of the largest guest-worker programs between a European and an Islamic nation is that between the Federal Republic of Germany (West Germany) and Turkey. Although Turkey had remained neutral in World War II, it had sided with the Germans in World War I and the ties between the two countries continued. Between 1950 and 1974, more than 1 million guest-workers migrated from Turkey to West Germany, and by the mid-1980s there were an estimated 1.5 million people of Turkish origin residing in that country.[55]

Equally significant are the guest-worker programs between nations of Islam. As of 1980, there were approximately 3 million guest-workers throughout the Middle East, working primarily in the oil-producing nations: Saudi Arabia (with 1 million workers), Libya (500,000), the United Arab Emirates (400,00), Kuwait (400,000), Iraq (100,000) and Qatar, Bahrain, Jordan, Oman, and Yemen (less than 100,000 each).[56] The principal sending countries have included Egypt (700,000), Pakistan (400,000), Yemen (300,000), Jordan, including the West Bank (250,000), and Iran (100,000).[57]

In general, guest-worker programs have been demographically and economically beneficial to both sending and receiving nations. The sending nations have been able to use the labor migration to siphon off a certain amount of population pressure, while gaining economically from the remittances sent home by the workers. The host countries benefit by receiving labor that, through normal migration selectivity, tends to be the cream of the crop without having had to invest in the rearing and education of the labor force. To be sure, the rapid economic development of the Gulf region would have been impossible without the massive in–migration of labor, and it is likely that foreign labor will be required for the foreseeable future.[58]

As a result of their country's need for outside sources of labor, native Kuwaitis now form a minority (43 percent) population within their own nation and this fact has led to a concern in that and other Gulf nations about the extent to which guest-workers may wind up being "settlers" rather than "sojourners." Most of these countries impose substantial barriers to citizenship for non-natives, but there is nonetheless some evidence of a rise in the number of expatriate men who are sending for their families and who are applying for naturalization in the oil-producing nations.[59] The alarm with which such events have been noted in the labor-receiving countries of the Arab Gulf is reminiscent of that which has been observed in the European reaction to the permanent settlement of guest-workers.

Urbanization

While some people from the nations of Islam have been migrating to other nations in search of opportunity, the search for a better life has more often focused on the larger cities of the developing countries themselves. High rates of population growth in rural areas, compounded by stagnating rural economies, have pushed many residents out of agrarian areas toward those areas where "development" is occurring—the cities.

In 1970 not a single city in an Islamic nation was within the largest 20 cities of the world in terms of population size. By 1985, Cairo, Egypt (with approximately 8 million people), Jakarta, Indonesia (ap-

proximately 8 million), and Teheran, Iran (7.5 million) were on that list. United Nations projections suggest that by the year 2000, 5 of the "top 20" will be Islamic cities—Cairo (with 11 million), Jakarta (13 million), Teheran (nearly 14 million), Karachi, Pakistan (12 million), and Dacca, Bangladesh (11 million).[60] This amazing growth of cities is occurring despite the fact that, as a group, Islamic nations remain the least urbanized of all the world's nations.

The national average percentage of the population living in urban places in 1988 was 48 worldwide, whereas Islamic nations averaged only 40 percent. Table 12 shows, however, that this average is brought down by the low urban fractions in sub-Saharan Africa, Southern Asia, and Southeast Asia. Northern African Islamic nations' percentages are right at the world average, while Western Asian Islamic nations are well above that average.

People are drawn to the city by the prospect of higher wages than in the countryside, the lure of education for their children, and the proximity to the source of whatever medical, social, and economic development may be occurring in the nation. This has been especially true in the capital cities of nations that have recently gained independence.[61]

It is too often the case, however, that the infrastructure of the city is no better able to cope with the growing population of new migrants than the infrastructure of the countryside. Thus we find in Cairo that an estimated 23 percent of the city's population is composed of slum-dwellers and squatters.[62] In Baghdad, Iraq, the figure is 29 percent; in Dacca, the capital of Bangladesh, the percentage is 35; and in Jakarta, the capital of Indonesia, it is 26 percent. These people join millions of others living like refugees within their own nation.

Table 12. Percent of the Population Living in Urban Places, Islamic Nations Compared With Other Developing Nations in the Same Geographic Region

Geographic Region	Islamic Nations percent	(no.)	Other Developing Nations percent	(no.)
North Africa	47	(6)	*	
Sub-Saharan Africa	28	(17)	32	(30)
Western Asia	59	(14)	76	(2)
South Asia	21	(4)	15	(4)
Southeast Asia	40	(3)	30	(8)

* All North African countries are Islamic.

Source: Population Reference Bureau, *1988 World Population Data Sheet*

Refugees in Islamic Nations

Refugees in Islamic nations come primarily from three sources: (1) tribal/ethnic conflict in sub-Saharan Africa; (2) the violence in Afghanistan between Afghan rebels and the Soviet forces occupying the country through 1988; and (3) the Palestinian refugees.

To be classified as a refugee by the United Nations, according to the Geneva Convention, a person must leave their country of origin in fear for their life, usually because of persecution due to race, religion, ethnicity, and/or political beliefs. War, drought, and famine are other reasons to leave one's country. In sub-Saharan Africa, the colonial politics of nation-building often created political boundaries that transgressed traditional ethnic demarcations, throwing historically competitive groups into the same country, while separating groups of similar ethnic background. Regardless of the reasons for so drawing maps, the demographic impact of the resulting series of conflicts has been to produce a population of more than 3 million refugees in sub-Saharan Africa. The list is headed by more than 1 million from Ethiopia, who

have fled primarily to Somalia and the Sudan to escape intertribal violence, aggravated by recent drought and famines.[63]

The conflict in Afghanistan has produced an estimated 5 million refugees from that country, with some 2 million estimated to be in Iran and 3 million in Pakistan. It is still too early to know if the promised withdrawal of soldiers from the Soviet Union will result in a repatriation of a significant number of Afghan refugees.

Another demographically and politically explosive refugee group are the Palestinians. As of 1987, there were an estimated 2.2 million Palestinian refugees, spread out principally among several Islamic nations, including Jordan (852,746), Gaza (447,850), West Bank (375,835), Lebanon (287,420), and Syria (259,854). Egypt, Kuwait, Iraq, and Libya also have smaller numbers of Palestinian refugees.[64] The number of refugees is only part of the demographic equation, of course, especially from the perspective of the receiving country. The other half of the equation is the size of the host country. In Jordan, for example, 1 out of every 5 people is a refugee; in Lebanon, 1 in 10, and in Somalia, 1 in 15. In the world as a whole, 10 of the 15 countries with the highest ratio of refugees to population are Islamic nations, underscoring the fact that two-thirds of the world's 13 million refugees reside in Islamic nations.

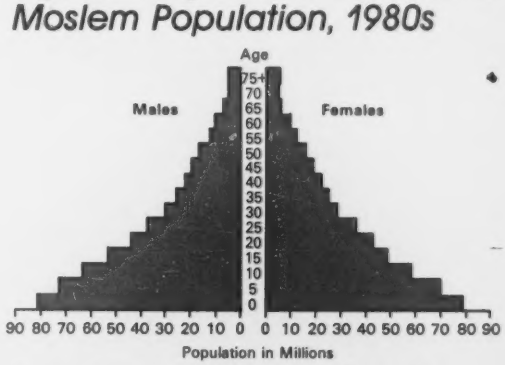
Worldwide, refugee settlements, like squatter settlements, tend to have fairly high death rates, but even higher birth rates, leading to a rapid rate of population growth, exacerbated by a young population with its own built-in momentum for additional growth.

Age and Sex Composition of Islamic Societies

One of the consequences of high fertility in any society is a very young age structure, characterized by a high proportion of people concentrated in the youngest age groups. Because Islamic nations tend to have higher-than-average fertility levels, they therefore also have younger-than-average populations. Islamic nations have an average of 43 percent of their populations under the age of 15, whereas other developing nations average 39 percent and developed nations average 22 percent below the age of 15.

These differences are displayed graphically in the accompanying age pyramids. Figure 7 shows the age-sex distribution for the Moslem population of the world. Among the 984 million Moslems of the world, 424 million (43 percent) are under the age of 15, while 34 million (3.5 percent) are aged 65 and older. The implications of this can better be appreciated by the comparison of a high-fertility nation (Pakistan), a lower-fertility developing nation (South Korea), and a low-fertility developed nation (Sweden). As can be seen in Figure 8, p. 36, Pakistan continues to have a classic pyramidal shape to its age structure, because substantial numbers of babies are still being added to the population each year. South Korea had a similar age-sex structure until very recently. Declining fertility has noticeably reduced the number of children relative to those of working age in the population. In Sweden, the longer history of declining fertility has

Figure 7. Age Structure, World Moslem Population, 1980s



Source: Population Reference Bureau estimate

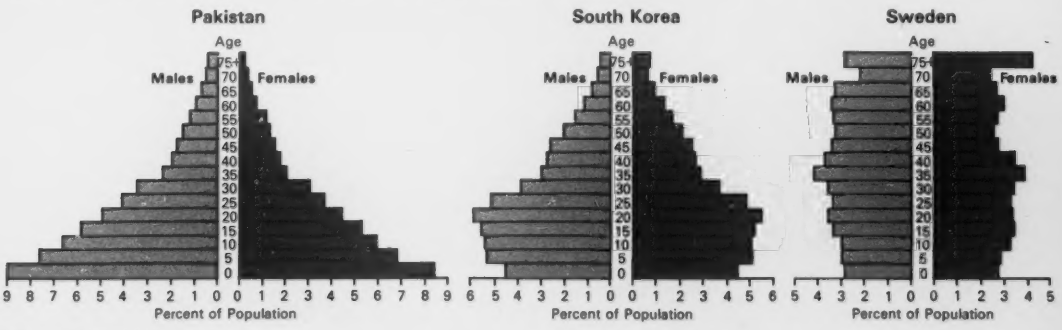
produced an age-sex distribution that more closely resembles a barrel than a pyramid. As mortality continues to decline, the shape will become increasingly rectangular.

A very young population has substantial momentum for further growth. There are so many young people already of reproductive age, along with those children already born who will be moving through their childbearing years, that the absolute number of children that will be added to the population in the next few decades will be high, even if the average number of children born to each woman declines. Thus, it can be seen in Figure 9, p. 38, that the worldwide population of Moslems will continue to increase halfway through the next century, even if fertility were to drop to nearly replacement level (just enough children to "replace" their parents; around 2.1 children per couple in developed countries).

A population's built-in momentum for growth is not just an abstract concept. It rears its head constantly as a society has to accommodate an ever-expanding labor force, and provide food, shelter, education, health and other services to an ever-increasing number of citizens. Consider that in Pakistan alone, each year brings with it an additional 1.2 million young men aged 16, about ready to enter the labor force, whereas there are only about 150,000 men reaching age 65 each year (who might be retiring and thus opening up a job). All other things being equal, Pakistan must either create more than 1 million new jobs each year (about 85 jobs per 100 new labor force entrants) or face higher rates of unemployment or underemployment. By contrast, in Sweden there are an additional 60,000 young men coming of working age each year, at the same time that some 45,000 are reaching retirement age. Sweden's economy has a much easier time absorbing new workers, because it has to create only 25 new jobs per 100 new entrants into the labor force.

The potential economic impact of the age-sex structure is often measured by the dependency ratio—the ratio of people of dependent ages, usually 0-14 years and 65 and over, to people of labor force age, usually 15-64 years. In Pakistan this ratio is .89, which means that each person of working age has to support himself or herself plus .89 additional persons. Put another way, in Pakistan there is nearly one dependent per person of working age. This obviously puts a severe strain on family and societal resources and severely hinders the ability to improve one's economic position in life. In South Korea, declining fertility has produced a dependency ratio of .51, nearly half the level of that in Pakistan. In

Figure 8. Age Structure Comparison: Islamic Nation (Pakistan), Non-Islamic Developing Nation (South Korea), and Developed Nation (Sweden), 1985



Source: World Bank

Sweden, a long-term decline in fertility generates a dependency ratio of .51, the same as for South Korea, even though the shapes of the two age distributions are different. South Korea has relatively more children than Sweden, but relatively fewer older persons.

In the long run, it is probable that the smaller numbers of people that must be supported by each worker, the more a worker's labor can be invested to help improve the overall standard of living. Thus, a change in the age-sex structure can be an important factor in a nation's economic development strategy.

Population Growth and Economic Development

Economic development refers to a rise in the average per person income. It represents an increase in the standard of living; an improvement in the human condition. In general, economic development is occurring if the rate of economic growth exceeds the rate of population growth and if the national "profit" is being spread out over the entire population.[65]

There is no question that today's Islamic nations include some of the economically least advantaged countries in the world, as well as some of the economically more advantaged. In 1988 there were 17 Islamic nations (36 percent) in which the average per capita income per year was less than $500. There were 23 non-Islamic nations (18 percent) that fell into that category. Thus, Islamic nations were nearly twice as likely to fall into the lowest income grouping. At the other extreme, there were four Islamic nations in 1988 (9 percent) in which the average income was $10,000 or more per year, compared with 15 non-Islamic nations (12 percent). Thus, Islamic nations were 25 percent less likely than non-Islamic nations to be in the top income category.

Is there something about Islam that might hold back a nation's development? The answer to this question must categorically be "No." Islam has an implicitly practical approach to life and there is nothing in Islam that would prevent or necessarily even slow down the pace of economic development within a society. The very fact that four of the highest-income nations in the world (Brunei, Kuwait, Qatar, and the United Arab Emirates) are Islamic is evidence of this. The wealth of all four of these nations is based on oil, as is the wealth of Libya (for which we do not have income estimates), and of Oman and Saudi Arabia (where the average income is high, but not quite $10,000). Even if we exclude these seven oil-producing nations, World Bank data show that between 1965 and 1986, the average annual increase in per person income was higher in the remaining Islamic nations (an average increase of 1.8 percent per year) than it was in the other developing nations of the world (1.7 percent per year).[66] Among the oil-producing nations of Islam, the average annual increase in per capita income was 2.8 percent per year, a rate that is higher than the combined average for non-Islamic developed nations (2.5 percent per year).

The data suggest, then, that the economies of the nations of Islam have been working harder than their counterparts in the non-Islamic world, but they have had a lot of ground to cover—a lot of economic catching up to do. One of the important underlying economic forces facing Islamic nations is the recency of independence.

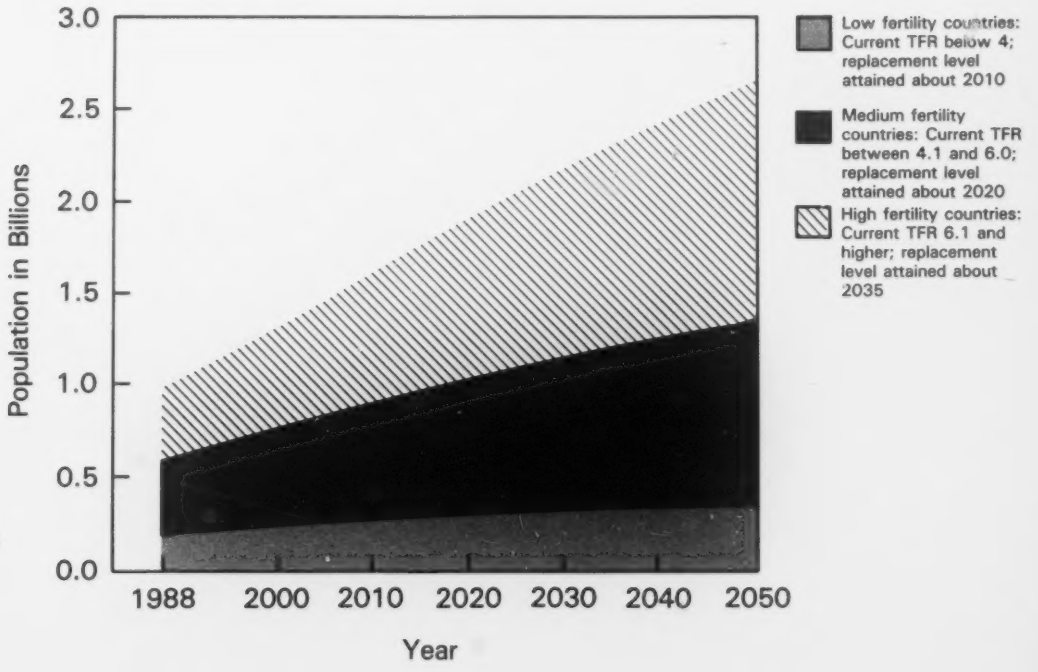
For several centuries, virtually all of the modern Middle Eastern Islamic nations were a part of the Ottoman Empire, with headquarters in Turkey. Trade and commerce were important economic activities, but Europe was developing economically at a more rapid pace than was the Ottoman Empire. Furthermore, from the time of the Crusades to the present century, the predominantly Christian nations of Europe regularly had

been at war with the Islamic nations of the Ottomans. Since most of the conflict over the centuries took place within the borders of the Islamic nations, their economic infrastructures suffered more than did Europe's.

By the beginning of the 20th century, European nations (especially Great Britain, France, Italy, Germany, the Netherlands, and Russia) had conquered, colonized, and had begun economically to exploit the resources of Islamic nations from sub-Saharan Africa all the way east to Indonesia. World War I completely polished off the power of the Ottomans, but Turkey re-established independence under Mustafa Kemal (later Ataturk) by declaring itself a secular republic. Under his presidency in the 1920s and 1930s, Turkey adopted the Latin script, abolished purdah, polygamy, and Islamic law, and adopted a European-style criminal and civil law. Turkey remained neutral in World War II, and moved into the postwar era as a participant in the European Recovery Program. Despite these massive changes, however, economic progress has been halting at best, regularly marred by political instability.

Turkey is 1 of only 4 of the world's 47 Islamic nations to have remained essentially independent since the beginning of the 20th century. The others are Ethiopia, Oman, and (until the Russian invasion in 1979) Afghanistan. During at least some part of this century, all 43 of the other Islamic nations had been under the direct colonial rule either of a European nation or, up to World War I, of the Ottoman Empire. In fact, of those 43 nations, 38 (88 percent) have gained independence from European domination

Figure 9. Projected World Moslem Population, 1988 to 2050 (countries grouped by current fertility level)



Source: Population Reference Bureau projections

only since the end of World War II. As a result, the nations of Islam tend to be very "young," with an average "age" since independence of only 36 years.[67] By comparison, the average "age" of non-Islamic developing nations is 44 years, and 22 of these nations (almost all of which are in Latin America) have been independent since before the beginning of this century.

Since most of today's Islamic nations had been under European control during the time the Industrial Revolution was gathering steam, they missed out on the opportunity to play an independent role in that transformation. It is reasonable to argue that centuries of suppression and exploitation by either the Ottomans and/or various European nations produced Islamic nations that were economically underdeveloped as the world emerged from the Second World War. These countries have spent the time since independence trying to gain a toehold in a highly competitive economic milieu. Some have been more successful than others. Most, if not all, of these countries are in a stage that has been called "economic dependency," in which economic development of a nation is dependent more upon foreign capital than it is on internal savings.[68]

Development occurs, of course, in a wide range of contexts, as the data in Table 13 illustrate. It shows the average per person income levels for Islamic and non-Islamic developing nations according to geographic region. There is considerable variability from one region to the next, and the data suggest that region is the more important correlate of variability in income. Sub-Saharan Africa and Southern Asia are least well off economically, regardless of whether the nation is Islamic or not. Furthermore, in 3 of the 4 regions in which there are both Islamic and non-Islamic nations, the average income of Islamic nations is higher than for non-Islamic nations, due largely to the presence of oil-producing nations.

The rate of growth of per person income during the two decades from 1965 to 1986 shows similar kinds of patterns, as can be seen in Table 14, p. 40. The highest rates of income growth have occurred in Southeast Asia, regardless of whether the nations are Islamic or non-Islamic. The slowest economic growth has been in sub-Saharan Africa, regardless of whether the nations are Islamic or not. Western Asia has fallen between the two extremes, again regardless of whether the nations are Islamic or not. This latter comparison is particularly intriguing, because economic development among the Islamic nations of Western Asia has been highly dependent upon oil production, whereas the two non-Islamic nations of Cyprus and Israel have few oil resources. Yet their income levels (see Table 13) and rates of economic growth (see Table 14) are somewhat similar to the other, Islamic nations of the region.

Economic development has a significant effect in demographic analysis because it almost always brings lower fertility in its train. Other kinds of social

Table 13. Per Person Income of Islamic Nations Compared With Other Developing Nations in the Same Geographic Region

Geographic Region	Islamic Nations		Other Developing Nations	
	US$	(no.)	US$	(no.)
North Africa	1076	(5)	*	
Sub-Saharan Africa	318	(14)	759	(26)
Western Asia	6046	(11)	5285	(2)
South Asia	273	(3)	247	(4)
Southeast Asia	5916	(3)	2247	(4)
Latin America	**		1873	(32)

* All North African nations are Islamic.
** All Latin American countries are non-Islamic.

Source: Population Reference Bureau, *1988 World Population Data Sheet*

changes, such as the changing status of women, might also lower fertility, but it is important to remember that, from a policy point of view, a major reason for concern about fertility levels is that a high rate of population growth may impair a nation's ability to develop economically.

We analyzed data for all developing nations to assess the relative importance of demographic, religious, and regional factors in explaining a country's level of per person income in 1988. Using statistical analysis, we found, not too surprisingly, that 58 percent of the variation in per capita income among developing nations was explained by whether or not a country had oil, even when controlling for all other factors. In other words, in the short run at least, it does not matter how quickly your population is growing if you have enough oil to bear the cost of that demographic overhead. However, when the presence of oil is isolated during analysis, the rate of population growth emerges as the most important correlate of per person income, followed by one index of the status of women—the ratio of girls per 100 boys enrolled in secondary schools. The lower the rate of population growth and the higher the status of women, the higher is a developing nation's per person income. Population growth and the status of women combine to explain 13 percent of variation in national levels of per person income (in addition to the 58 percent of variation explained by whether or not the country was an oil producer). Neither being an Islamic nation nor geographic region is important in its own right as a predictor of income levels.

Finally, turning the relationship around, we asked how income influences fertility levels, when we control for Islam, geographic region, and the status of women. The answer, produced by regression analysis, was that per person income has little independent influence on fertility levels in developing nations. A far more important correlate of fertility levels was found to be a measure of the status of women. The higher the ratio of girls to boys enrolled in secondary schools, the lower the fertility. That variable alone, when controlling for income, Islam, and geographic region, accounted for 34 percent of the variation in the total fertility rate among developing nations. Whether or not the country was sub-Saharan explained another 10 percent in the variation in fertility—countries in sub-Saharan Africa having decidedly higher fertility, even controlling for income and whether or not the nation is Islamic. Being an Islamic nation gave an additional 7 percent in predictive power, after controlling for the effects of the status of women, geographic region, and income. Income, itself, was not a statistically significant predictor of fertility levels within the developing world, although income is strongly predictive of fertility levels on a worldwide basis, because the income gap between developed and developing nations (an average difference of more

Table 14. Average Annual Rate of Growth of Per Person Income of Islamic Nations Compared With Other Developing Nations in the Same Geographic Region, 1965-86

Geographic Region	Islamic Nations		Other Developing Nations	
	percent	(no.)	percent	(no.)
North Africa	2.4	(5)	*	
Sub-Saharan Africa	0.2	(11)	1.1	(21)
Western Asia	3.6	(7)	2.6	(1)
South Asia	1.4	(2)	2.2	(3)
Southeast Asia	4.5	(2)	4.0	(4)
Latin America	**		1.1	(21)

* All North African nations are Islamic.
** All Latin American countries are non-Islamic.

Source: World Bank, *World Development Report 1988* (New York: Oxford University Press, 1988)

than $10,000) is as wide, in relative terms, as is the fertility gap (an average difference of 2.2 children per women as measured by the total fertility rate). Within the developing world, the differences between countries in income and fertility are not nearly as marked as are those differences between developed and developing nations.

Our analysis suggests, then, that short of finding oil on your back doorstep, lowering the rate of population growth and bringing women more strongly into the development process may help to improve national levels of per person income. This is a conclusion to which many, but not all, Islamic nations have come as they have grappled with the issue of population policy within their borders.

Population Policies in Islamic Nations

Population policies may be either direct or indirect. A direct policy is aimed specifically at influencing demographic behavior through the so-called proximate determinants. With respect to lowering fertility, a direct policy would be one that raised the legal age for marriage for women, or legalized abortion, or made contraceptives more widely available. An indirect policy is aimed at influencing the motivation of people to control family size, as when a government tries to discourage births by paying people not to have children (on some of the tea estates in India, for example), or encouraging births by paying people to have children (for example, by offering free maternity care and child allowances). An indirect policy tries to change behavior that is a known determinant of demographic behavior, in the hope that the net result will be the type of population change the government has in mind. When a government encourages the education of women, it is likely that the indirect effect will be a future decline in fertility. Most policies are a mix of direct and indirect measures designed to steer the nation's demographic course. Although our examples refer to fertility, population policy may also refer to mortality and migration as well. However, our concern in this report will be on policies oriented toward family size, since in Islamic nations that is the most crucial policy issue with respect to future population growth.

Policies dealing with reproductive behavior may have as their goal the increase, the maintenance, or the lowering of fertility levels and thereby growth rates. If the latter goal is paramount, the policy may try to produce a decline by increasing the motivation to limit family size and/or by increasing the availability and accessibility of methods by which fertility can be limited.

Islamic nations vary significantly in the governmental positions taken toward population growth. This variability is due in part to the ambivalence of Islam per se toward the topic of demographic change and population control, and in part to the fact that Islamic nations, like all nations of the world, are more likely to respond to demographic change on the basis of individual, community, and national self-interest than on the basis of ideology (whether it be religious or political). Joseph Chamie has noted that "due largely to Islam's structure—for example, the absence of an official religious head, such as the Pope, or a formal governing body—and to its primary reliance on the Koran and Hadith, each country, religious leader, or scholar is able to render an interpretation of Islam's stance on fertility and control. As a result, numerous differing 'official' statements dealing with Islam's position have been made."[69]

We have already seen that Islamic nations are not opposed to fertility control, although there are wide differences in whether and how family planning programs are promoted (as will be discussed below). There is considerable variability with respect to the position on abortions and sterilization. Of the 18 Islamic nations for which data were available in 1987, 7 (39 percent) permitted

female sterilization on request, while 4 (22 percent) specifically prohibited it, and the remainder (39 percent) permitted it for medical reasons but not for purely contraceptive purposes.[70] Iraq permits sterilization on request, but only if a woman has already given birth to seven children, while Jordan requires a minimum of six children before allowing sterilization. Many non-Islamic nations have various restrictions on who may seek sterilization, but none has such a stringently high family-size requirement.

The variability of attitudes toward population growth among both Islamic and non-Islamic nations is apparent in Table 15. In half of the Islamic nations of the world, the government is satisfied with the present rate of growth, according to a recent United Nations survey.[71] In another 40 percent of the Islamic nations, the governments said that the rate of population growth is too high. Only 10 percent of Islamic nations report that the rate of growth is too low—a slightly smaller percentage than among non-Islamic developing nations. There are five Islamic countries in which the governments specifically say they feel that the rate of growth is too low—Iraq, Kuwait, Oman, Qatar, and Saudi Arabia—despite the fact that the annual rate of population growth in these four countries averages almost 3.2 percent, which is nearly twice the world average. Table 16 shows that it is the fastest growing Islamic nations that want to grow faster. Part of this is explained, however, by their relatively small size, and each has experienced an influx of foreign workers over the past few decades to help with oil production. At the time of the 1986 UN survey, Iraq was almost certainly concerned as well with its population size of 18 million relative to neighboring Iran's 52 million, given the war that was then raging between them.

The explicit statements of countries that their rate of growth is too low do not exhaust the pro-growth position among Islamic nations. Among those countries reporting to the United Nations that they were satisfied with current rates of growth, there were five who also indicated that they were engaged in efforts to raise the rate. Three were Islamic—Côte d'Ivoire, Mauritania, and the United Arab Emirates (the other two were Luxembourg and Romania). These three nations also have high rates of growth (an average of 2.9 percent per year) and Mauritania and the UAE each have less than 2 million population. Côte d'Ivoire, the former Ivory Coast, is one of the economically more prosperous sub-Saharan nations and has experienced a substantial in–migration of job-seekers from neighboring countries.[72] As in so many countries, the government of Côte d'Ivoire prefers population growth to occur from within the country, rather than (or at least along with) in–migration. Thus, there is an official government effort to boost the birth rate through meas-

Table 15. Official Government View of the National Rate of Population Growth, Islamic and Non-Islamic Nations

	Percent of Governments Saying that the Rate of Population Growth is:			Number of Countries
	Too High	Satisfactory	Too Low	
Islamic Nations	40	50	10	38
Other Developing Nations	52	35	13	75
Centrally-Planned Economies	0	43	57	7
Developed Nations	0	84	16	25

Source: United Nations, *World Population Trends and Policies: 1987 Monitoring Report* (New York: United Nations, 1988) Table 3.5

Table 16. Rate of Population Growth and Size of Population, According to Government View of Rate of Population Growth, Islamic and Non-Islamic Nations

	Average Percent of Population Growth Per Year	Average Size of Population (millions)
Islamic Nations:		
Growth is Too High	2.6	51
Growth is Satisfactory	2.9	10
Growth is Too Low	3.2	9
Non-Islamic Developing Nations:		
Growth is Too High	2.5	59
Growth is Satisfactory	2.4	18
Growth is Too Low	2.2	6
Centrally-Planned Economies:		
Growth is Too High	n/a	n/a
Growth is Satisfactory	0.6	113
Growth is Too Low	0.2	15
Developed Nations:		
Growth is Too High	n/a	n/a
Growth is Satisfactory	0.4	31
Growth is Too Low	0.2	34

Sources: United Nations, *World Population Trends and Policies: 1987 Monitoring Report* (New York: United Nations, 1988); Population Reference Bureau, *1988 World Population Data Sheet*.

ures such as the provision of maternity benefits and child allowances.

Malaysia wants to prevent continued drops in its rate of growth, but this is connected to the political situation of having three major ethnic groups in the country. Fertility has been declining in Malaysia, as it has in most areas of East and Southeast Asia. Although some income-tax deductions and maternity benefits are being put into place to provide direct economic incentives to have children, the widespread availability of family planning in a country that has exhibited a range of motivations to limit family size will likely contribute to a continued drop in the birth rate. Fertility has declined among all three of the major ethnic groups in Malaysia—the Malays (who are predominantly Moslem), the Indians (who are predominantly Hindu), and the Chinese. The latter two groups have experienced the more rapid decline, but they are also more urban and educated than are the Malays. A recent rise in the birth rate in Malaysia created a stir, but it appears that it was actually a short-run consequence of Moslem women having postponed marriage (which contributed to the nation's overall fertility decline), but then marrying and having their first or second child, temporarily raising the birth rate, but not contributing to a long-term upswing.[73]

It is well documented, of course, that people do not necessarily respond to a government's wishes when those wishes are not in the peoples' best interest. Rarely, if ever, in human history have human populations voluntarily increased the birth rate because a government wanted such an action.[74] Nor do they necessarily limit fertility just because a government wants them to. Some significant motivation for lower fertility must be introduced into the environment and, where attitudes may be leaning toward lower fertility, a strong program of fertility control must be introduced and supported.

At least some of these elements are at work in the 40 percent of Islamic nations that expressed the belief that the current rate of population growth is too high. In Egypt, for example, the emphasis has been on making family planning services available. Private voluntary organizations opened family planning clinics in urban areas as early as the 1950s, although in order to obtain assistance a woman had to show that she already had three children, had obtained her husband's permission, and had a medical reason for seeking contraception.[75] As restrictive as that was, it still "helped set the stage for the far more massive government effort currently underway in Egypt, in which government health clinics dispense pills, IUDs, and other con-

traceptives, and outreach workers distribute contraceptives in rural areas."[76]

Indonesia is the Islamic nation that has probably made the greatest headway in reducing its rate of population growth. Between 1955/60 and 1987, the total fertility rate in Indonesia declined by 42 percent (from 5.7 to 3.3)—a drop exceeded in the Islamic world only by neighboring Malaysia's 44 percent (from 6.9 to 3.9). (During this interval of time, the average decline among all Islamic nations was 10 percent.) The immediate explanation for the drop in fertility was the rapid increase in contraceptive use among married couples of reproductive age—from 3 percent in 1971/72 to 48 percent in 1987.[77] In part this reflects the fertility decline throughout the region (among both Islamic and non-Islamic nations), but Indonesia has been a trendsetter within the region. The government philosophy toward population growth was expressed by President Suharto in 1984:

> To meet the three challenges of population [size, distribution, and quality], it seems that the principal solution lies in the implementation of a population-oriented development pattern, a development pattern in which population is both the subject and object of development. ... Improved quality of population and increased human capacity will further ensure the creation of a just and prosperous society in the future, in a world which will enable human beings to fully materialize their human potentials in order to lead a more fruitful life.[78]

Important to the success of the Indonesian family planning program has been the strong support of President Suharto and of Islamic religious leaders. "Suharto has provided political, administrative, legal, moral, and budgetary support. ... Of great importance has been Suharto's support for the family planning program's budget even when, as in 1986, government revenues were falling."[79]

The Indonesian government was also careful to consult with and enlist the help of Moslem leaders, many of whom initially were opposed to the concept of the family planning program for fear that it would violate Islamic traditions. First, the government omitted from the family planning program the two methods most opposed by Moslems: abortion and sterilization. Then government officials personally contacted religious leaders to explain the program and elicit their recommendations about implementation. "Once their attitudes toward the program became more positive, they were asked to help promote family planning. The shift among religious leaders from a stance of hostility to one of active support, seen in many parts of Indonesia, was a field triumph for the program."[80] Islamic leaders then assisted by assuring the community that family planning was in accordance with the Koran, by adding family planning messages into wedding ceremonies, and by actively telling individuals about the program.

In Indonesia it is clear that the motivation existed for a fertility decline (for a variety of reasons that are not yet well documented but especially in response to post-independence economic and social development). Islam here also adapted to earlier beliefs and practices; women always had a voice in decisions and were never isolated by purdah, for instance. The government's family planning program thus helped to accelerate a decline in fertility that was already on the verge of occurring.

Throughout the developing world, in Islamic and non-Islamic nations, there are few examples of governments successfully trying to motivate couples to limit fertility. Some countries may echo the sentiments of Syria's President Hafez Al-Assad who commented in 1984 that, in Syria, "the great improvement expected in education, *especially for females*, will affect fertility rates, and will result in the decline of population growth rates" [emphasis added].[81] Within Islam there is a growing awareness of the changing role of women in society, and there is recognition of the changing structure of reproductive behavior that is implied by the gender role changes. Another basic element is that as mortality

declines, both children and adults survive longer. Bringing the number of live births down to a "comfortable" level can still result in a family structure that is demographically more stable than anything ever imagined under the old regime of high mortality and high fertility.

While the motivational component of fertility limitation may be left to indirect measures, the availability of the means of fertility control is usually dependent upon direct governmental support. One way of measuring this is to employ the index of family planning program effort developed by Robert Lapham and W. Parker Mauldin.[82] The program effort score assigns values to each of the following components of a successful family planning program: (1) policy and stage-setting; (2) services; (3) record-keeping and evaluation; and (4) availability and accessibility. The scores for each component are summed to produce an overall index of family planning program effort. Scores can range from zero (no effort) to 120 (maximum effort). Using this method, they found that China produced the highest score (101), while Libya, Kampuchea, and several other nations had scores of zero.

Islamic nations have program effort scores that average less than those of other developing nations (see Table 17). In general, scores for developing nations average only 28, which would be counted a "weak" effort in the classification scheme. Nonetheless, Table 17 also shows that there is a consistent pattern in both Islamic and non-Islamic nations for the program effort score to go up as the government position on population growth goes from "too low" to "too high." Certainly there is room for considerable improvement in program effort in nearly all developing nations in Africa and most of Asia, especially in those nations which have indicated that they would like to lower their overall rate of population growth. All of the data available to us suggest that Islamic nations are as likely to respond to this challenge as are non-Islamic nations and the nature of the response will more likely reflect a nation's socioeconomic and sociocultural conditions than it will be based on that nation's predominant religious group.

Table 17. Family Planning Program Effort Score, According to Government View of Rate of Population Growth, Islamic and Non-Islamic Nations

	Family Planning Program Effort Score
Islamic Nations:	25
Growth is Too High	38
Growth is Satisfactory	18
Growth is Too Low	4
Non-Islamic Developing Nations:	41
Growth is Too High	46
Growth is Satisfactory	38
Growth is Too Low	30

Sources: United Nations, *World Population Trends and Policies: 1987 Monitoring Report* (New York: United Nations, 1988); and Robert J. Lapham and W. Parker Mauldin, "Contraceptive Prevalence: The Influence of Organized Family Planning Programs," *Studies in Family Planning*, Vol. 16, No. 3 (May/June 1985) Table 1

Conclusion

In this *Bulletin* we have examined the demographic situation in 47 Islamic nations, focusing primarily on the causes and consequences of population processes (fertility, mortality, and migration), population composition, population growth, and population policies. Based on the best estimates available, we identified and included in this study the 40 nations in which a majority of the population adheres to Islam and another seven nations in which a significant minority (25 to 49 percent) of the population is Moslem. By geographic region, 22 of these Islamic nations are in the Middle East (7 in Northern Africa and 15 in Western

Asia), 17 are in sub-Saharan Africa, 4 in Southern Asia, 3 in Southeast Asia, and 1 (Albania) in Europe.

To place the demographic situation of the Islamic nations in its proper perspective, our analysis focused on comparing the demographic variables in Islamic nations (virtually all of which are developing nations) with the corresponding variables in other, non-Islamic developing countries, nations with centrally-planned economies, and developed nations. Furthermore, within each region we compared the demographic situation of the Islamic nations with that of the non-Islamic nations.

Overall, we found that the Islamic nations had higher fertility and mortality levels, higher rates of population growth, higher percentages of young people (under 15 years of age), and higher percentages of rural people than other categories of nations. In general, as a group, the nations of Islam may be placed in the early stages of the demographic transition, characterized by high fertility, declining mortality, and rapid population increase. However, these demographic generalizations conceal noticeable regional and temporal diversity in fertility, mortality, and population growth among the Islamic nations.

Fertility and mortality rates are highest for those Islamic nations in sub-Saharan Africa. Yet the fertility and mortality of non-Islamic sub-Saharan African nations were higher than those of the Islamic nations in other regions. Thus, regardless of whether a nation is Islamic or not, being in sub-Saharan Africa is associated with high fertility and high mortality. In Southeast Asia the three neighboring Islamic nations of Indonesia, Malaysia, and Brunei have fertility levels that are well below those of other Islamic nations in the world, as well as being lower than most other developing nations in their region. Furthermore, during the past 30 years, fertility dropped substantially in the Islamic nations of Southeast Asia, as it did in other nations in the region. Fertility also declined noticeably in North African Islamic nations and to some extent in Western Asian nations as well. In Southern Asia, there has been only a very small fertility decline among both Islamic and non-Islamic nations.

Our conclusion is that whether the nation is Islamic or not, regional differences seem to be important in explaining fertility levels. This is clearly evident in the considerable regional diversity in contraceptive use and in the percentage of teen-aged women who are married in both Islamic and non-Islamic nations. The results of our statistical analysis showed that among the developing countries the most important factor explaining the differences in contraceptive use and in teen-aged marriages was a geographic one—specifically, whether the country was in sub-Saharan Africa, regardless of whether the country was Islamic or non-Islamic. This analysis also revealed that contraceptive use is by far the most important of these variables in explaining between-country differences in fertility levels. After controlling for contraceptive use, the proportion of teenagers who are married, and geographic region, there was nothing unique about Islamic nations that could explain the differences in fertility.

Our study also supports the proposition that the relatively high mortality levels in Islamic nations has nothing to do with Islam. Rather, it is a function of economic disadvantage. In both Islamic and non-Islamic developing countries, life expectancy increases with the increase in per capita income of the nation. Infant mortality rates and maternal mortality rates are also highly sensitive to national per person income levels. We also found variations in mortality levels by region, since some geographic zones are by nature (quite literally) less hazardous than others.

Migration in Islamic countries has been fairly commonplace for a long time. We have examined briefly three important types of migration in Islamic nations: guest-worker international migration, rural-to-urban migration, and forced

refugee migration. In general, the guest-worker programs have been demographically beneficial to both sending and receiving nations. Rural-to-urban migration in some Islamic nations has led to the rapid growth of cities, growth that cannot be supported by the city's infrastructure. Refugees in Islamic nations represent two-thirds of the world's 13 million refugees.

An important issue which we have examined in this study is the relationship between population growth and economic development. There is no question that the Islamic nations include some of the economically least-advantaged countries in the world, as well as some of the economically more advantaged. Our analysis indicates that there is nothing about Islam per se that might hold back a nation's development. On the contrary, the data suggest that the economies of the nations of Islam have been working harder than their counterparts in the non-Islamic countries, but they have had a lot of economic catching up to do in order to overcome several centuries of deprivation and exploitation during the periods of foreign occupation and colonization.

In the period since the mid-1960s, the rate of income growth per person has varied considerably from one region of the world to another. Among developing nations the highest rates of growth have occurred in Southeast Asia, regardless of whether the nations are Islamic or non-Islamic. The slowest income growth has been in sub-Saharan Africa, again regardless of whether the nations are Islamic or not. Western Asia has fallen between the two extremes, regardless of whether or not the nations are Islamic.

In reviewing population policies in Islamic nations we found that, like all nations of the world, they vary considerably in governmental positions on reproductive behavior and population growth. In 40 percent of the Islamic nations, the governments expressed the belief that the current rate of population growth is too high. Another 50 percent of governments were satisfied with their present rate of population growth. Only 10 percent of Islamic nations have governments that specifically say that the rate of population growth is too low. Not surprisingly, then, Islamic nations also vary widely in whether and how family planning programs are promoted. In a few Islamic nations pronatalist governments have been wary of making fertility control measures widely accessible. On the other hand, the governments of many more Islamic nations are implementing family planning programs, or are supporting the efforts of voluntary family planning associations, or at least permitting the distribution of contraceptive methods in public and private medical and health care facilities. Some Islamic nations, including Indonesia, Tunisia, Egypt, and Turkey, have been making impressive headway in promoting contraceptive use and reducing fertility rates. Obviously, there is room for considerable improvement in program effort, not only in Islamic nations, but in all developing countries. Yet, all of the data available to us suggest that Islamic nations are as likely to respond to this challenge as are other developing nations.

Overall, our demographic journey leads us to the conclusions that: (1) there is considerable diversity among Islamic nations; and (2) there are few demographic patterns in Islamic nations that appear to be a direct result of religious influence. We noted at the beginning of this *Bulletin* that the demographic interest in Islamic nations lies especially in the high fertility levels that prevail in most (but certainly not all) countries in which a large fraction of the population is Moslem. The evidence seems to point clearly to the conclusion that it is not Islam itself that produces this result. This conclusion is shared by many scholars, [83] but we should note that not all would agree.[84] Nonetheless, in our view, the high fertility found in many Islamic nations is more likely a consequence of the recency of social and economic development in nearly all Islamic nations. Thus, the major impediment to the process of

demographic transition in these nations seems to be the lateness with which they started the process of social and economic development. It is difficult to make up ground, socially and economically, when the population pressure is incessant, as it is when mortality continues to decline at least as rapidly as fertility is declining. The young age structure that is produced by higher-than-average fertility combined with declining mortality not only pushes a nation's resources to the limits right now in attempting to educate, clothe, feed, house, and find jobs for a greater number of people each year; it also has a built-in momentum for growth that will continue to produce ever greater numbers of babies each year even though the overall levels of reproduction may be falling.

Governments of all Islamic nations are aware of these interrelationships and only those with higher-than-average incomes continue to press for high rates of population growth. Even in the few countries where the government is pronatalist, an increase in the age at marriage is at work to lower fertility and that will almost certainly be followed by an increase in the use of contraception to space children within marriage, which may eventually lead to the use of contraception to limit family size within marriage. Social change may take place slowly in traditional societies, but once it begins, it usually gains its own momentum. □

References

1. This calculation uses the population projections of Haub, Carl and Mary Mederios Kent, *1988 World Population Data Sheet* (Washington, DC: Population Reference Bureau, Inc., April 1988) and assumes no change over time in the proportion of the population in each country that is Moslem.
2. The material in this section is drawn especially from Endress, Gerhard, *An Introduction to Islam* (Edinburgh: The University of Edinburgh Press, 1988); Weekes, Richard, ed., *Muslim Peoples: A World Ethnographic Survey*, 2nd edition (Westport, CT: Greenwood Press, 1984); Williams, John A., *Islam* (New York: George Braziller, 1962); and Mahmud, S.F., *The Story of Islam* (London: Oxford University Press, 1959).
3. Weekes, *Muslim Peoples . . .*, p. xxxvi.
4. *Ibid.*, p. xxxvi.
5. We have included Iran in Western Asia, rather than in Southern Asia (as it is shown on the PRB *World Population Data Sheet* and in United Nations publications). Geographically, the mountains of Afghanistan separate Iran from the Indian sub-continent and socioculturally, Iran is more closely tied to the "Middle East" than it is to the Indian subcontinent.
6. Legge, J.D., *Indonesia*, 3rd edition (Sydney, Australia: Prentice-Hall, 1964).
7. We have included China in the category of developing nation, rather than with countries having centrally-planned economies, since virtually all of the other centrally-planned economies are in Europe and have a rather different demographic profile than that of China.
8. Throughout this report we have calculated unweighted averages, giving each individual nation equal weight, regardless of population size. In this way, the larger countries do not dominate the average, and we are better able to discern inter-country differences.
9. India's birth rate is especially problematic, of course, because of the sheer size of the Indian population. Given its growth rate in 1988, India was adding about 16 million people to the world's total each year, whereas the Islamic nation with the highest fertility rate (North Yemen) was only adding about 200,000 people each year to the world's total.
10. Davis, Kingsley, *The Population of India and Pakistan* (Princeton, NJ: Princeton University Press, 1951).

11. United Nations Population Division, *Methods of Estimating Basic Demographic Measures from Incomplete Data*, Manual IV, Population Studies No. 42, ST/SOA/Series A/42 (New York: United Nations, 1967).
12. Davis, Kingsley, "The Theory of Change and Response in Modern Demographic History," *Population Index*, Vol. 29, No. 4 (October 1963).
13. Weeks, John R., *Population: An Introduction to Concepts and Issues*, 4th edition (Belmont, CA: Wadsworth Publishing Co., 1989).
14. Blake, Judith, "Coercive Pronatalism and American Population Policy," in Vol. VI, Charles F. Westoff and Robert Parke, Jr., eds., *Demographic and Social Aspects of Population Growth*, Report of the U.S. Commission on Population Growth and the American Future (Washington, DC: Government Printing Office, 1972).
15. Ansley Coale, "The Demographic Transition," in Vol. 1, *Proceedings of the International Population Conference*, Liege, Belgium, August 27-Sept. 1, 1973 (Liege, Belgium: International Union for the Scientific Study of Population, 1974).
16. Omran, Abdel R., *Population Problems and Prospects in the Arab World*, Population Profiles No. 22 (New York: United Nations Fund for Population Activities, 1984).
17. Hathout, Hassan, "Ethics and Human Values in Family Planning Perspectives in the Middle East," paper presented at the 22nd Conference of the Council for International Organizations of Medical Sciences, Bangkok, Thailand, June 1988.
18. van de Walle, Francine and Nassour Ouaidou, "Status and Fertility Among Urban Women in Burkina Faso," *International Family Planning Perspectives*, Vol. 11, No. 2 (June 1985).
19. See, for example, Lesthaeghe, Ron, "On the Social Control of Reproduction," *Population and Development Review*, Vol. 6, No. 4 (December 1980); and Leasure, J. William, "La baisse de la fécondité aux Etats-Unis de 1800 à 1860," *Population*, Vol. 37, No. 3 (Mai/Juin 1982).
20. Foster, George, *Tzintzuntzan: Mexican Peasants in a Changing World*, revised edition (New York: Elsevier Science Publishing Co., 1979).
21. El-Hamamsy, Laila, "Belief Systems and Family Planning in Peasant Societies," in Harrison Brown and Edward Hutchings, Jr., eds., *Are Our Descendants Doomed? Technological Change and Population Growth* (New York: Viking, 1972) quoted in Gadalla, Saad, *Is There Hope? Fertility and Family Planning in a Rural Egyptian Community* (Chapel Hill, NC: The Carolina Population Center, 1978).
22. Kent, Mary Mederios and Ann Larson, "Family Size Preferences: Evidence from the World Fertility Surveys," *Reports on the World Fertility Survey* No. 4 (Washington, DC: Population Reference Bureau, Inc., April 1982) p. 37.
23. Chamie, Joseph, *Religion and Fertility: Arab Christian-Muslim Differentials* (Cambridge, England: Cambridge University Press, 1981).
24. See Davis, Kingsley and Judith Blake, "Social Structure and Fertility: An Analytic Framework," *Economic Development and Cultural Change*, Vol. 4, No. 4 (1956).
25. Bongaarts, John, "The Fertility-Inhibiting Effects of the Intermediate Fertility Variables," *Studies in Family Planning*, Vol. 134, No. 6/7 (June/July 1982).
26. Gadalla, *Is There Hope? . . .*, p. 78.
27. Allman, James, *Women's Status and Fertility in the Muslim World* (New York: Praeger Publishers, 1978).
28. United Nations Population Division, *The Determinants and Consequences of Population Trends*, Vol. 1, Population Studies No. 50 (New York: United Nations, 1973) p. 81; and Brown, Judith E., "Polygyny and Family Planning in Sub-Saharan Africa," *Studies in Family Planning*, Vol. 12, Nos. 8/9 (August/September 1981).
29. Gadalla, *Is There Hope? . . .*
30. Nichols, Douglas, Salif Ndiaye, Nadine Burton, Barbara Janowitz, Lamine Gueye, and Mouhamadou Gueye, "Vanguard Family Planning Acceptors in Senegal," *Studies in Family Planning*, Vol. 16, No. 5 (September/October 1985).
31. Khalifa, Mona A., "Attitudes of Urban Sudanese Men Toward Family Planning," *Studies in Family Planning*, Vol. 19, No. 4 (July/August 1988) p. 242.
32. We used ordinary least-square regression techniques, with stepwise entry of the independent variables. Each of the independent variables was coded as a dummy variable (e.g., Islamic/non-Islamic; sub-Saharan/not sub-Saharan, etc. Northern Africa and Western Asia were the reference groups for the geographic categories since they are virtually completely Islamic).

33. Henshaw, Stanley, "Induced Abortion: A Worldwide Perspective," *International Family Planning Perspectives*, Vol. 13, No. 1 (March 1987).
34. Coeytaux, Francine M., "Induced Abortion in Sub-Saharan Africa: What We Do and Do Not Know," *Studies in Family Planning*, Vol. 19, No. 3 (May/June 1988).
35. Ross, John A., Marjorie Rich, Janet P. Molzan, and Michael Pensak, *Family Planning and Child Survival: 100 Developing Countries* (New York: Columbia University, Center for Population and Family Health, 1988) Table 7, pp. 42-43.
36. Ross et al, *Ibid.*, Table 38, pp. 240-245.
37. Safilos-Rothschild, Constantina, "The Status of Women and Fertility in the Third World in the 1970-1980 Decade," Working Paper No. 18, Center for Policy Studies (New York: Population Council, 1985).
38. Dixon, Ruth, *Rural Women at Work* (Baltimore: Johns Hopkins University Press, 1978).
39. See Weeks, *Population . . .*, Chapter 5 for a review.
40. Tessler, Mark, Janet Rogers, and Daniel Schneider, "Tunisian Attitudes Toward Women and Childrearing," in James Allman, *Women's Status . . .*
41. Huston, Perdita, *Message from the Village* (New York: The Epoch B Foundation), p. 97.
42. "Tunisia: FP Program Grows, But Contraceptive Use Lags in Some Areas," *International Family Planning Perspectives*, Vol. 14, No. 1 (March 1988).
43. Farid, Samir, "Fertility Patterns in the Arab Region," *International Family Planning Perspectives*, Vol. 10, No. 4 (December 1984).
44. Population Crisis Committee, "Country Rankings of the Status of Women: Poor, Powerless and Pregnant," Population Briefing Paper No. 20 (Washington, DC: Population Crisis Committee, 1988).
45. Anderson, John E., Abdallah Abdel-Aziz, Leo Morris, and Borhan Shrydeh, "Fertility Trends and Determinants in Jordan," *International Family Planning Perspective*, Vol. 11, No. 2 (June 1985); Kohli, K.L. and Musa'ad H. Al-Omaim, "Fertility Levels, Trends and Differentials in Kuwait," *Journal of Biosocial Science*, Vol 18, No. 2 (April 1986).
46. Ata, Ibrahim Wade, *The West Bank Palestinian Family* (London: KPI, 1986).
47. Omran, Abdel R., "The Epidemiological Transition: A Theory of the Epidemiology of Population Change," *Milbank Memorial Fund Quarterly*, Vol. 49, No. 4 (October 1971); see also, Irfan, Mohammad, "Mortality Levels and Trends in Pakistan," in *Mortality and Health Issues: Review of Current Situation and Study Guidelines: Report and selected background papers of the Meeting on Analysis of Trends and Patterns of Mortality in the ESCAP Region*, Asian Population Studies Series No. 63 (Bangkok, Thailand: ESCAP, United Nations, 1985) for an application to Pakistan.
48. Omran, Abdel, *Ibid.*
49. Simmons, George, editorial, "Reproductive Mortality in Developing Societies," *American Journal of Public Health*, Vol. 76, No. 2 (February 1986).
50. Fortney, Judith A., Inne Susanti, Saad Gadalla, Saneya Saleh, Susan M. Rogers, and Malcolm Potts, "Reproductive Mortality in Two Developing Countries," *Ibid. AJPA.*
51. United Nations Population Division, *1986 Demographic Yearbook*, 38th edition (New York: United Nations, 1988).
52. Arriaga, Eduardo E. and Peter O. Way, "Determinants of Excess Female Mortality," *Population Bulletin of the United Nations*, Nos. 21/22 (1987).
53. Al-Alwani, Mustapha, "The Hadj and Migration: Islamic and Demographic Perspectives," *Population Bulletins of ECWA*, No. 20 (June 1981).
54. Revzin, Philip, "North Africa's cities, full of jobless youths, cast shadow on Europe," *Wall Street Journal*, November 3, 1988, p. 1.
55. United Nations Population Division, *Trends and Characteristics of International Migration since 1950*, Demographic Studies No. 64 (New York: United Nations, 1979).
56. Appleyard, R.T., "International Migration in the ESCAP Region," in *Third Asian and Pacific Population Conference (Colombo, September 1982): Selected Papers*, Asian Population Studies Series No. 58 (Bangkok, Thailand: ESCAP, United Nations).
57. Birks, J.S., I.J. Seccombe, and C.A. Sinclair, "Migrant Workers in the Arab Gulf: The Impact of Declining Oil Revenues," *International Migration Review*, Vol. 20, No. 4 (Winter 1986).
58. Seragedlin, Ismail, Sames A. Socknat, Stace Birks, Bob Li, and Clive A. Sinclair, *Manpower and International Labor Migration in the Middle East and North Africa* (New York: Oxford

University Press for the World Bank, 1983); and Roukis, George and Patrick J. Montana, eds., *Workforce Management in the Arabian Peninsula: Forces Affecting Development* (New York: Greenwood Press, 1986).

59. Sabagh, Georges, "Immigrants in the Arab Gulf Countries: 'Sojourners' or 'Settlers'," in Giacomo Luciani and Ghassan Salame, eds., *The Politics of Arab Integration* (London: Croom Helm, 1988).
60. United Nations Population Division, *The Prospects of World Urbanization, Revised as of 1984-85*, Population Studies No. 101 (New York: United Nations, 1987).
61. El-Shakhs, Salah,"Population and the Planning of Large Cities in the Middle East," paper presented at the International Conference on Population and the Urban Future, Barcelona, Spain, May 1986.
62. Mertens, Walter,"Population and the Urban Future: An Overview," paper presented *Ibid.*
63. U.S. Committee for Refugees, *World Refugee Survey: 1987 in Review* (Washington, DC: American Council for Nationalities Services, 1988) pp. 31 and 33.
64. *Ibid.*, p. 33.
65. See Weeks, *Population . . .*, Chapter 13 for a review of the relationship between population growth and economic development.
66. World Bank, *World Development Report 1988* (New York: Oxford University Press, 1988).
67. In this calculation, we began our count in 1900. Thus, any country independent in 1900 would be calculated as having 88 years of independence since the beginning of the century.
68. See, for example, Bradshaw, York W.,"Reassessing Economic Dependency and Uneven Development: The Kenyan Experience," *American Sociological Review*, Vol. 53, No. 5 (October 1988).
69. Chamie, Joseph, *Religion . . .* p. 38.
70. Ross et al, *Child Survival . . .*, Table 7, pp. 42-43.
71. United Nations Population Division, *Global Population Policy Database, 1987*, Population Policy Paper No. 9 (New York: United Nations, 1987); and official government statements.
72. Patriquin, Wendy,"Spotlight: Côte d'Ivoire," *Population Today*, Vol. 15, No. 11 (November 1987) p. 12.
73. Hirschman, Charles,"The Recent Rise in Malay Fertility: A New Trend or a Temporary Lull in a Fertility Transition?" *Demography*, Vol. 23, No. 2 (May 1986).
74. In Romania in 1966 the government was able to force a rise in the birth rate by severely curtailing abortion and ceasing to import contraceptives. However, the Romanians quickly responded by finding other means of limiting fertility. Nonetheless, the government continues officially to push for a higher birth rate of four children per woman.
75. Gadalla, *Is There Hope? . . .*
76. Weeks, *Population . . .*, p. 420.
77. Warwick, Donald P.,"The Indonesian Family Planning Program: Government Influence and Client Choice," *Population and Development Review*, Vol. 12, No. 3 (September 1986); and National Indonesia Contraceptive Prevalence Survey, 1987.
78. United Nations Fund for Population Activities, *Population Perspectives: Statements by World Leaders*, 2nd edition (New York: United Nations, 1985) pp. 82-83.
79. Warwick,"Indonesian . . .," p. 455.
80. *Ibid*, p. 467.
81. UNPFA, *Population Perspectives . . .*, p. 152.
82. Lapham, Robert J. and W. Parker Mauldin, "Contraceptive Prevalence: The Influence of Organized Family Planning Programs," *Studies in Family Planning*, Vol. 16, No. 3 (May/June 1986).
83. See, for example, Chamie, *Religion and Fertility . . .*; and Ahmad, Sultan and Lado Ruzicka, "Muslim Fertility Differences Across Countries," paper presented at the Seminar on Fertility Transition in Asia: Diversity and Change, Bangkok, Thailand, (March 1988).
84. See, for example, Kirk, Dudley, "Factors Affecting Moslem Natality," Vol. II, United Nations, *Proceedings of the World Population Conference*, August 30-September 10, 1965, Belgrade, Yugoslavia (New York: United Nations, 1967); and Wolfgang Lutz, "Culture, Religion, and Fertility: A Global View," *Genus*, Vol. 43, Nos. 3-4 (July-December 1987).

Box 2. Can We Estimate the Size of the Moslem Population in the United States?

Among the five most populous nations of the world, the United States has by far the fewest Moslems. Of that fact we can be certain. But, what *is* the number of Moslems in the United States? That turns out to be a difficult question to answer. Neither the census nor any other large national survey collects reliable data on religious preference. Although some data do exist on church attendance, Islam does not require attendance for formal membership in the way that many Christian groups do. There is also no major minority group that can be identified as being predominantly Moslem (as is true, for example, in China and the Soviet Union). How then do we arrive at a reasonable estimate or range of values within which the actual number of Moslems in America is apt to lie?

One source of estimates is that developed by Richard Weekes, whose 1983 estimates formed the basis for the data in Table 1 and Figure 1 of this *Bulletin.* He estimates that there are approximately 1.5 million Moslems in the United States (see Table). Professor Weekes provides no specific sources for these U.S. estimates, although they appear to be derived by consensus among professional anthropologists. The "undetermined" category apparently refers to non-black Americans who have converted to Islam and are not members of one of the other groups listed in the Table. Note that one assumption underlying these estimates is that for groups such as Arabs, a high proportion of migrants to the U.S. are non-Moslems. This may be less true today than it was even a decade or so ago. If we were to assume that a higher percentage of Arabs, South Asians, and Persians in the United States are Moslem, then the estimate of the Moslem population obviously would be higher. For example, if we assume that 75 percent of Arabs are Moslem (rather than 10 percent) and that 75 percent of Persians (Iranians) are Moslem (rather than 50 percent), the estimate increases from 1.5 million to 3.4 million. Other assumptions about the percentage of Moslems in each group will yield correspondingly different estimates of the total size of the U.S. Moslem population.

Another estimate has been published by Yvonne Haddad of the University of Massachusetts.[1] She quotes the work of two other American researchers, each of whom independently has estimated the U.S. Moslem population circa 1986 to be approximately 3 million. This, of course, is very similar to the figure generated above by changing some of Professor Weekes' assumptions.

More recently, the May 23, 1988 issue of *Time* magazine quoted an estimate of 4.6 million Moslems in the United States. This figure was derived from a study by Carol Stone, a doctoral student at Indiana University, who presented her estimates in a paper at a symposium organized by Professor Haddad. Although that number has received considerable publicity, there is some question as to its accuracy. Professor Haddad believes it may be too high because it relies on what may be unrealistically high proportions of immigrants from Moslem-majority nations being assumed to be Moslem. Nonetheless, Professor Haddad notes that because of continued migration of Moslems to the U.S., along with higher-than-average fertility among Moslem immigrants and converts, it is possible that the Moslem population of the U.S. could reach 6 million by the year 2000.[2]

Islamic leaders within the U.S. are more inclined to accept Ms. Stone's estimate of 4.6 million as reflecting the current or even minimum size of the Moslem population in the U.S. There are more than 600 mosques or Islamic centers in

Group	Percent Moslem	1983	Total Number of Moslems
American Blacks	2		500,000
Arabs	10		300,000
South Asians	11		100,000
Turkic	100		25,000
Persians	50		25,000
Albanians	25		8,000
Malays	100		6,000
Undetermined	—		500,000
Total			1,464,000

America and informal counts of the number of people coming to pray and to break the fast during Ramadan have suggested to some individuals that the number of Moslems may already exceed 5 million in the United States.[3] Sharifa Alkhateeb, a Washington, D.C. social scientist, notes that most estimates of the U.S. Moslem population do not sufficiently take into account the offspring of Moslem migrants, nor the conversion and reproduction of other Americans, especially American blacks.[4] It should be noted that many American Black Moslems are integrated into the mainstream of Islam in the United States, while others are followers of Minister Louis Farrakhan's Nation of Islam.[5]

In the absence of more certain information, it is probably reasonable to assume that, as of 1988, the Moslem population of the United States was somewhere between 1.5 and 6 million. It is certain, however, that the Moslem population is growing numerically at a more rapid rate than the population as a whole, and there are concerted efforts currently underway by Islamic groups to increase the public awareness of Islam in America.

References

1. Haddad, Yvonne Y., "A Century of Islam in America," *The Muslim World Today, Occasional Paper No. 4* (Washington, DC: American Institute for Islamic Afairs, 1986).
2. Haddad, personal communication, 1988.
3. Alkahateeb, Sharifa, personal communication, 1988.; Al-Marayati, Salam, personal communication, 1988.
4. Alkhateeb.
5. Haddad, "A Century . . . ."

Discussion Points

1. Characterize the demography of Islamic nations in comparison with other developing countries and developed nations. Consider variables such as fertility and mortality, urbanization, education, and age composition. If possible, consult PRB's *World Population Data Sheet* for additional information.

2. What tenets of the Islamic religion might directly or indirectly account for the high fertility levels found in Islamic nations? Compare other major religious traditions on the question of fertility control.

3. Outline the demographic profile of the oil-producing Islamic nations. Compare this profile to those for other Islamic countries, developed countries, and countries with centrally-planned economies.

4. What cultural norms in Islamic society have an impact on the four factors—Bongaarts' Proximate Determinants—that affect fertility?

5. An improvement in the status of women usually leads to lower fertility in a society. How can changes in the status of women affect the proximate determinants of fertility?

6. Demographers refer to the shift from high fertility and mortality to low levels as the "Demographic Transition." Using Figure 2, explain the Islamic nations' position in this transition and compare it with other developing countries and the United States.

7. Demographers refer to the ratio of young people (ages 0-14) and older people (those 65 and over) to the working age population (ages 15-64) as the "dependency ratio." Using Pakistan as an example, characterize the dependency ratios of Islamic nations in comparison with other developing countries and developed nations.

8. The author of the *Bulletin* argues that factors *other* than Islamic religion are of prime importance in the high fertility of Islamic nations. How does he substantiate this argument? Do Islamic nations differ demographically from non-Islamic populations in the regions in which they are located?

9. Many Moslems are guest-workers or migrant laborers in other countries. Describe some of the main migration streams and discuss their consequences for both host and sending countries as well as for migrants and their families.

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